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CONTENTS

	PAGE
Editorial Notes	173
Superintendent of the Line	175
Railway Passenger Traffic	175
Passenger Transport in Glasgow	175
George Stephenson	176
New Northern Ireland Transport Act	176
Letters to the Editor	178
The Scrap Heap	180
Overseas Railway Affairs	181
Superintendent of the Line	182
New and Proposed Lines in Norway	184
Electric Traction Section	185
Mixed-Traffic Electric Locomotives for Holland	185
High Mileage between Repairs in Kenya	188
Dock Gate Repairs at Plymouth Millbay	188
Another Unbroken Main-Line Crossing	190
Personal	191
The York Royal Show	194
Abstracts of Recent Patents	195
Parliamentary Notes	196
Questions in Parliament	196
Notes and News	197
Official Notices	199
Stock Market and Table	200

INDEX

An index to the eighty-eighth volume of THE RAILWAY GAZETTE covering the issues from January 2 to June 25, 1948, has been prepared, and is now available free of charge on application to the publisher.

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THE RAILWAY GAZETTE
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Operation of Argentine Railways by the State

IN the short time since the Transport Secretariat became responsible for the operation of the ex-British-owned railways in Argentina, several resolutions have been taken. One of the most important is the appointment of a special committee to report on the manner in which the railways were managed between July 1, 1946 (since which date they were operated for account of the Argentine Government) and March 1, 1948, when they were taken over by the State. The Committee is also to study the best and quickest way of bringing to a successful conclusion the complete and final transfer of the property of the railways to State ownership. All questions arising from the transfer will be referred to the Committee for immediate decision. It will also control the legal and commercial representation of the ex-British companies, to which end two accountants have already been appointed. Another committee, the objective of which is the co-ordination of the rates and tariffs structures used by the different transport organisations, has been formed under the presidency of the Under Secretary of Transport. Sub-committees have been named for sea and river, air, railway, and road transport; these are required to study the charges made under each system with a view to a general co-ordination of transport rates. The railway sub-committee is composed of the Acting Deputy Director of Railways; the Chief of the Rates & Economic Survey Section of the Railway Board; and representatives of the Rates Sections of the State Railways and each of the ex-British railways. Other resolutions taken by the Transport Secretariat are the elimination of reserved coaches without charge; and the taking over of the Post Office parcels service.

Road Transport Executive

Last week-end the Road Transport Executive moved into its permanent headquarters at 222, Marylebone Road, N.W.1, the former Great Central Hotel, which is already housing the Railway Executive. Major-General G. N. Russell, the Chairman of the Road Transport Executive, held his first press conference last Monday, when he explained that the Executive had already commenced its work. For administrative purposes, the country has been divided into eight divisions, which in some respects are not unlike the six railway regions. We may interpolate here that they may eventually approximate more closely to the railway regions, if certain of the rumoured divisions and changes in the latter are put into effect. The Divisional Managers will be responsible for the operation of the haulage services in the divisions and for co-operating with the appropriate railway officers to secure the greatest measure of co-ordination of road and rail services. In this they will work within the framework of the policy laid down by the Executive, and will be responsible for ensuring that principles of co-ordination are carried out at all levels within the divisions. So far, no schemes have been formulated for the passenger side of the industry, but the three bus companies acquired by the British Electricity Authority have passed to the control of the Executive.

Rail-Road Co-ordination

General Russell emphasised that long-distance haulage by road will be continued and encouraged within economic limits; where alternative transport exists the trader will have his choice. The level of charges on the road in relation to those on the railways will be a matter of policy for the British Transport Commission. The Road Executive will maintain the closest contact with the Railway Executive, and so that the greatest measure of co-ordination of services may be achieved with the railway regions, Mr. J. C. Chambers, formerly Road Transport Liaison Officer, Southern Region, has been appointed at headquarters as Co-ordination Officer. He will prepare reports for submission to the Executive on steps which are considered desirable. For the present, individual names of undertakings acquired will be retained. The position as regards railway cartage agents is not affected by the acquisition of road companies; their retention is a matter for the Railway Executive. The function of railway motor vehicles will remain unchanged, and any alteration in this matter would be a question of high policy for the British Transport Commission.

Continued Rise in Wage Rates

The endeavours of both Government and industry to implement a policy of stabilised wages has never achieved any marked success. The latest figures issued by the Ministry of Labour show that in June increased rates of wages came into operation, amounting to about £129,000, in the weekly full-time wages of about 538,000 workpeople. These increases caused a rise of one point in the index of the average level of weekly wage rates, which now stands at 106, based on June, 1947, as 100. Over the same period the index of retail prices has risen from 100 to 110. In the first half of this year some 3,277,000 workers have participated in wage rate increases which aggregate about £962,500 a week, or about £50 million a year. Among the latest applicants for higher pay are the engineers and shipbuilders, whose unions are pressing for wage increases of 13s. and 15s. a week respectively. The hearing of their application by court of enquiry set up by the Minister of Labour is expected to begin next week. The railwaymen also are contemplating increased wage demands.

The Irish Transport Inquiry

Sir James Milne, formerly General Manager of the Great Western Railway, who is undertaking an inquiry into the Southern Irish transport system, has been asked by the Irish Government to furnish his report as soon as possible in view of the serious position of the transport services. He has already met the Chairman, Directors, and General Manager of the Irish Transport Company (Coras Iompair Éireann) and has done a good deal of preliminary work on reports and data which had been compiled on the general state of the undertaking. All departmental heads in the company have been instructed to be available for the period of August 9 to 23. Elsewhere in this issue we give the names of those who are to assist Sir James Milne in his inquiry, the terms of reference of which are to examine and review the position of rail, road, and canal transport and to report to the Minister for Industry & Commerce on the steps necessary to secure (a) the greatest co-ordination of these forms of transport; (b) the restoration of the financial position of the public transport companies; and (c) the most efficient and economical transport system.

South African Railway Results

The revenue in March, 1948, from all services operated by the South African Railway Administration was £7,984,856, a new record, the previous highest monthly total having been £7,074,667, in January, 1948. Despite the high level of earnings, there was a deficit of £384,265 on the March working, attributable to the greater expenditure of £8,297,127, caused by higher cost of living allowance payments, end of the year adjustments, and increased operating and maintenance costs. Railway accounts for the financial year ended March 31, 1948, showed a net deficit of £603,231. Revenue from all services for the year amounted to £82,637,495, another record, compared with £74,565,967 for the financial year 1946-47. Total expenditure was £82,390,726, compared with £73,925,251. Airways show a remarkable surplus of £469,547, revenue amounting to £952,388 and expenditure to £482,841. Expenditure on harbour services was £347,983 and revenue £445,372. Steamships showed a deficit of £60,693.

American Pullman Conferences

The conference habit is more fully developed in the United States than in Great Britain, especially in the railway industry. The Pullman Company believes that the best means of impressing on the employee the importance of the contribution he can make to improvements in service, and convincing him that he is an important factor in the organisation, as well as letting him know that the management also is made up of persons with problems to solve and jobs to do, can best be accomplished by means of conferences. At these, opportunity is also taken to tell employees something of the state of the business, its aims, its possible future, and the responsibility of both employees and management in it. This year the Pullman management and its 14,000 conductors, porters, and attendants have held service conferences for the third consecutive year

in a series which began on February 26 and continued until June 10. In all, more than 1,100 separate conferences were held throughout the country. Attendance at the conference was voluntary, but in the case of both conductors and porters it was in excess of 99 per cent. of all men available. A number of railway representatives also attended.

South American Railway Development

In a survey of the railway position in South America, and the steps which are contemplated to improve the transport network of that continent, the *South American Journal* suggests that developments will tend towards hemispheric expansion. As a first step, it will be necessary to integrate isolated railways within the boundaries of each separate State into coherent networks. This will be slow and costly, but among others, Brazil, Colombia, and Venezuela are taking steps in this direction. The most immediate consideration, however, is the rehabilitation of existing railways, which it has not been possible to maintain properly during the recent war years. When it has become feasible to do this, it is believed that the trend will be towards linking the various systems so as to enable the transport of goods by rail from any part of South America to any other part of the continent. It is appreciated, however, that the work involved will take a long time; decades may elapse before the South American railway network approaches that of Western Europe or North America in respect of extension, mileage, or amenities.

A Career in Locomotive Engineering

Interest in railways, and in particular the steam locomotive, probably has never stood so high among young persons as it does today. In a number of youths, this interest is no more than a phase and reaches no higher development than amassing a collection of locomotive numbers; in others, however, there is a progression to a desire for a wider knowledge of locomotive design and operation—a progression which in many cases leads to a career in the locomotive industry. To assist such young persons, as well as their parents, in deciding whether this engineering aptitude should be developed into a career, the Vulcan Foundry Limited has produced an illustrated booklet entitled "A Career in Locomotive Building," in which the Vulcan Foundry training scheme is lucidly explained. Boys are accepted as either trade or engineering apprentices, equal opportunities for reaching the highest positions being given in both cases. Boys intending to enter the trade apprentice scheme are required to give evidence of a sound elementary education and a good report from their last headmaster; on acceptance, they are entered on a course for any one of a variety of trades. The engineering apprentice training scheme is intended to fit young men for executive positions, though in this case, candidates must have had a secondary or public school education, and reached school certificate standard.

New Dutch Electric Locomotives

We describe in this issue the mixed-traffic electric locomotives which are being delivered to the Netherlands Railways. The first of the class is now in service, and tests are reported to have been completely satisfactory. They are the first electric locomotives to run in Holland, other than the Eastern Region electric locomotive No. 6000, lent to the Netherlands Railways for trials. Hitherto, the Dutch railways, like our own Southern Region, where somewhat similar operating conditions are found, have used multiple-unit trains exclusively, but there is proof that the phase is passing and that electric locomotives will haul longer-distance passenger trains and heavy goods trains. In particular they will be of great use in handling the coal traffic from the Limburg mines, when the electrification is extended southwards, and the international boat trains. An important consideration in Holland has always been that of weight, as the ground traversed by many of the lines is waterlogged, and this has been met in the present locomotives by arc-welding and care in designing. The performance of the locomotives will doubtless be studied with great interest in Belgium, where a vast electrification project, involving the use of electric locomotives for the first time, is in hand.

Superintendent of the Line

ALONE among the four main-line railway companies which were constituted by the Railways Act of 1921 and came into being on January 1, 1923, the Great Western Railway retained the title of Superintendent of the Line for one of its chief officers. Since it became the Western Region of the Railway Executive the title of Chief Goods Manager has been changed to Commercial Superintendent. But the title of Superintendent of the Line has not been changed.

Will the good old title of Superintendent of the Line be changed to bring it into conformity with the title of corresponding officers in other regions? That will not be easy because there is no uniformity in the other regions. On the Southern Railway we have a Superintendent of Operation. On the London Midland Region we have a Chief Operating Manager. On the Eastern Region we have an Operating Superintendent (Eastern Section) and an Operating Superintendent (Western Section). On the North Eastern Region he is just plain Superintendent. On the Scottish Region he is Operating Superintendent. Unless, therefore, the title of all the foregoing officers is changed for the sake of uniformity there does not appear to be any good reason for abolishing the good old and comprehensive title of Superintendent-of-the-Line on the Western Region. If uniformity is so important let them all be Superintendents of the Line, which in effect they are.

Up to "grouping" the standard titles for the seven chief officers of a British railway were, General Manager, Chief Goods Manager, Superintendent of the Line, Chief Engineer, Chief Mechanical Engineer, Secretary, and Solicitor. There were a few exceptions to this general rule. In 1902 Sir George Gibb, following a visit to the U.S.A., separated the commercial work previously controlled by the Superintendent of the Line and placed it under a "Chief Passenger Agent," and the title of Superintendent of the Line was changed to General Superintendent. When Cecil Paget succeeded John Elliott as Superintendent of the Line of the Midland his title was changed to General Superintendent, but he still retained the commercial work. For a period the Great Northern Railway adopted the North Eastern organisation and adopted the titles of General Superintendent and Chief Passenger Agent and then reverted back to Superintendent of the Line.

What are the functions of the Superintendent of the Line of the Western Region of the Railway Executive? The answer is given concisely and completely in the organisation chart and explanatory notes on pages 182 and 183. This shows the extraordinarily wide scope of the office, which not only fully justifies the title, but indicates very clearly how difficult would be the task of finding another so apt.

Railway Passenger Traffic

A STUDY of the monthly statistics relating to passenger traffic on British Railways and London Transport Railways issued by the British Transport Commission for the current year compared with 1947 shows that to the end of April there was a decline of 12,235,080 (or 3.53 per cent.) in passenger journeys of all descriptions (ordinary, workmen, week-end, season, cheap day tickets, etc.) on British Railways.

Conversely, the London Transport railways show substantial increases in passenger journeys.

On British Railways there was a small net increase (0.75 per cent.) in workmen's journeys over the period against a substantial decline in season ticket journeys of 11.15 per cent. A possible explanation of the decline in season-ticket journeys, apart from the general recession in business such as the departure of women from employment, may be the increased cost of such tickets which has been a factor in compelling some members of the lower salary groups to discard period tickets for daily workmen's tickets and road travel, on the grounds of domestic economy. This view seems to find support in the increased figures shown for the Southern Region, and to a lesser extent in the Scottish Region.

The decline in journeys in the Western, Eastern, and North Eastern Regions is particularly severe. In the North Eastern Region, which covers the N.E. Development area, the fall must be looked upon with disquiet if the downward trend is not rectified in succeeding months.

The total decline of 3.53 per cent. in passenger journeys of all classes is accompanied by an increase of 11.9 per cent. in traffic receipts in respect of passenger business, which postulates that the individual passenger is bearing a greater proportion of the cost of travel. If there is no new accession of traffic, such a burden is liable to become greater, unless economies can be introduced to offset rising operating costs, of which no information is given in the monthly statistics.

The figures for London Transport Railways and the Southern Region again point to the continued growth of traffic in the Greater London area and seem to indicate that employment opportunities in the metropolis are still increasing and inviting migration from the provinces.

Passenger Transport in Glasgow

A COMPREHENSIVE scheme for the improvement of passenger transport facilities is envisaged by Mr. E. R. L. Fitzpayne, General Manager, Glasgow Corporation Transport, in his report submitted to the Municipal Transport Committee in May last. At the present time the city and its surrounding districts are provided with a maze of railways, both surface and underground, by far the greater part of which was primarily intended for passenger services. Although many of these lines were promoted in a spirit of keen competition between the pre-grouping railway companies, and a great deal of capital was expended on their construction, they have never carried an intensive service, and proposals for electrification have always proved abortive. This failure to exploit the possibilities of these routes to the greatest extent is attributable to the development of the highly-efficient Corporation electric tramway system, with its extraordinarily cheap fares, and, more recently, to the introduction of bus services.

In the inner area the tramways are supplemented by the Underground Railway (the former Subway), which was acquired by the Corporation in 1923. Electric traction superseded the original cable haulage 12 years later. The railway is laid to a gauge of 4 ft., and the tunnels and stations are of decidedly cramped dimensions. In March, 1947, the Municipal Transport Committee instructed its Sub-Committee on Finance & Works to consider the possibility of extending

PASSENGER JOURNEYS TO END OF APRIL, 1948, COMPARED WITH SAME PERIOD OF 1947

	Workmen		Season tickets		Total all classes of passenger journeys		Receipts	
		Per cent.		Per cent.		Per cent.	£	Per cent.
London Transport (to 16.5.48) ...	+ 4,458,183	14.45	+ 1,217,171	3.06	+ 14,626,787		+ 2,780,000	14.63
Southern Region ...	+ 1,655,563	7.05	- 3,056,637	5.71	+ 1,530,111		—	—
London Midland Region ...	+ 33,602	0.12	- 4,026,051	12.90	- 4,297,854		—	—
Scottish Region ...	+ 55,659	1.35	- 1,812,454	18.08	- 1,642,528		—	—
Western Region ...	+ 326,395	3.98	- 1,074,327	7.38	- 3,324,535		—	—
Eastern Region ...	- 275,297	3.04	- 2,167,811	16.84	- 1,872,196		—	—
North-Eastern Region ...	- 560,778	12.72	- 817,046	20.50	- 2,628,078		—	—
Total differences (B.R. Regions) ...	+ 582,354	0.75	- 12,954,326	11.15	- 12,235,080		+ 3,406,000	11.9
London Transport ...	Per cent.		Per cent.		Per cent.		Per cent.	
British Railways ...	+ 14.45		+ 3.06		+ 6.12		+ 14.63	
	+ 0.75		- 11.15		- 3.53		+ 11.9	

the line to serve the east end of the city. In view of the gauge of the railway and the dimensions of the tunnels, it was decided not to recommend this extension, but to consider the whole question of developing the transport facilities of the city on the lines set out in the General Manager's Report.

The proposals are closely linked with the City Engineer's First Planning Report (already adopted by the Corporation), in which it is envisaged that the present system of tramways is eventually to be superseded. It is therefore proposed that certain suburban lines owned by the British Transport Commission should be electrified and that a standard-gauge rapid transport system, embodying the best features of a street tramway and those of an electric underground railway, should be developed to cater for districts which do not already possess suitable railway facilities. It is proposed that the rapid transit system shall make physical connection with the electrified railways at certain points. Feeder road services, which will not enter the central area, are an important feature of the scheme.

Although some six miles of the new rapid transit system, chiefly in the centre of the city, would be underground, as far as possible most of the new railways would be constructed at street level, but clear of ordinary vehicle traffic. Automatic colour-light signalling would enable an intensive service to be provided.

The construction of the tunnels for the rapid transit lines would occupy a considerable time, and it is considered that this work should be put in hand at the earliest opportunity. It is realised that this is a long-term policy, and that many difficulties would arise in the transitional period. To minimise delays and inconvenience to passengers, it is considered that the electrification of the selected railways should not be delayed, as most of this work could be carried out without serious dislocation of traffic. The plan is purely local and municipal, and the report gives no indication that the British Transport Commission has been consulted.

George Stephenson

ONE hundred years ago, on August 12, 1848, George Stephenson died at his home at Tapton House, near Chesterfield, a wealthy man and an honoured and international figure. So ended the career of the man who was born 67 years earlier as the second son of a labourer, but whose influence on life in the nineteenth century was more profound than that of any of his contemporaries—for indeed it is difficult to imagine the commercial and industrial life and developments of that era without the public steam-operated railways which George Stephenson gave to the world.

It is fitting, after the passage of a century, to reflect on the character of the man, as well as on his gift to civilisation. George Stephenson's temperament was such that he always was quick to observe, and eager to find out the causes of what he observed. The way in which he doggedly overcame one of his greatest early handicaps by learning to read and write at the age of eighteen, is characteristic of the man. Yet, while his natural inclinations and talents might have carried him far, it probably was economic necessity which provided the additional spur. His first wife died in 1806, when their son Robert was only three years old, and soon afterwards his father was blinded in a colliery accident. Stephenson courageously undertook the maintenance of his parents, as well as his son, and his versatility showed itself in the many tasks he undertook to augment his wages: clock and watch repairing, making clothes and boots, and other hand work which could be done at home, all were made to give him opportunities to improve his knowledge and skill.

It was his appointment in 1812 as engineer in charge of the engines at Killingworth Colliery which perhaps was most far-reaching, for it gave him the chance to obtain that unrivalled insight into steam engineering which later enabled him to make his unique contribution to civilisation. Probably he is known most widely for his pioneer work in connection with the steam locomotive, but this, important though it is, represented but one side of his multifarious activities. He was not the "inventor" of the locomotive—there was no inventor, as the principles of steam traction were already known and had been applied in various forms by Trevithick, Murray,

and others. What he did was to apply those principles to an ordinary railway for the first time in an economic manner.

The commercial adoption and development of the steam locomotive awaited the financial incentive provided by the enormous rise in the cost of horse fodder during the Napoleonic wars. As the need for a mechanical alternative to horse haulage became acute, George Stephenson, with the approval of his employers, built a locomotive with ordinary flanged wheels, and placed it on the Killingworth Colliery Railway on July 25, 1814. This engine, which was the first that propelled itself by the adhesion of its wheels on edge rails, proved reasonably successful, both mechanically and economically. To increase the efficiency of the locomotive became a principal concern in Stephenson's life, and the development of the public railway may be dated from this period.

Much has been written about Stephenson's genius and about his many outstanding achievements, and there is no need to enumerate them here, for they are not likely to be forgotten; though as an inventor he was hardly of the calibre of many whose names come quickly to mind. His strength lay rather in his ability to combine, and make the utmost use of, the facilities then scattered around him. The master-stroke of combining a multi-tubular boiler and a blast-pipe in a single machine is an example. His greatness as a railwayman sprang from his belief in railways, and his determination that they should be as perfect as he could make them.

In a century of unparalleled rate of change, his ideas have stood the test of time in a way which can have few equals. Thus, it is appropriate that the locomotive-manufacturing firm which he founded in 1823, with his son Robert as manager, should continue to flourish at the present time. In the smallest details, too, there is interesting evidence of his almost uncanny insight and soundness of judgment. As an instance, the pitch for the centres of the firebox stays in the *Rocket* has been but little varied right down to the present day.

By general consent, the building of the *Rocket* and the conquering of Chat Moss are his greatest achievements. The lustre of these home triumphs, however, sometimes tends to diminish appreciation of the magnificent work he did in introducing railways to the outside world. The confidence he inspired in this means of transport made him its natural ambassador, and as a result many countries adopted British practice as the model for their own railways. Great Britain has never lost that prestige in railway and locomotive engineering which, through his efforts, was hers from the outset. As a gift to his country, that initial lead which he enabled her to secure, ranks in value with the railways he initiated. His work covered a wide field of civil, mechanical, and mining engineering, and combined to make him one of the most outstanding figures produced by the industrial revolution.

New Northern Ireland Transport Act

THE Bill dealing with the merger of transport undertakings in Northern Ireland, which was recently before Parliament of that territory, received the Royal Assent on August 10, and is now law under the title of the Transport Act, Northern Ireland, 1948. The framework of this Act corresponds roughly with that of the British Transport Act, 1947, but there are important differences, both in principle and in detail, and below we indicate the more important of these distinctions.

The Minister of Commerce for Northern Ireland, when speaking at the second reading of the Bill in the Northern Ireland Senate, referred to three principles embodied in it; first, the concentration of public transport into a single undertaking; secondly, the creation of an authority appointed by the Government, but otherwise left with complete freedom to manage its undertaking as it thinks fit; and thirdly, the institution of an impartial tribunal with ample powers to protect the interests of the public in respect of charges, conditions of carriage, and facilities. If to these principles we add the principle of voluntary acquisition, we have a short list of the points where the major differences arise as compared with the British Act, and a more detailed consideration of these differences at this stage would not be out of place, leaving the minor differences to be dealt with further on.

First, for the purposes of the Act there is to be established a public authority called the Ulster Transport Authority, which

corresponds to the British Transport Commission. It is to consist of not less than five nor more than ten members appointed by the Minister of Commerce for Northern Ireland, and practically the same qualifications and disqualifications are laid down as in the British Act. Unlike the British Transport Commission it is, however, the sole authority for the administration and management of its undertaking, as there will be no subsidiary bodies corresponding with the Railway, Road Transport, London Transport, and other Executives, which are such an important feature of the British set-up, and which have been appointed to assist the Commission in the performance of its duties. Again, the Northern Ireland Act does not make provision for consultative committees corresponding to the Central Transport Consultative Committee and the various Regional Committees, with their attendant personnel, procedure and functions, as outlined in the British Act.

In addition to the simplicity of its constitution and administration as outlined above, the second point which strikes one in reading the Irish Act is the almost complete freedom which is given to the new authority to manage its undertaking as it thinks fit. Unlike the British Act, no power is reserved by the Minister to give the authority directions of a general character, as to the exercise and performance of its functions. Although no doubt there will be close liaison between the authority and the Ministry, no power is given to the latter to settle the authority's financial policy, as has been done on this side, neither has the Ministry over there taken any powers to direct the authority to dispose of or sell any part of its undertaking or securities from time to time. The authority, therefore, is largely free from Government interference in the carrying out of its duties and functions, save to such extent as it is amenable to the transport tribunal mentioned further on.

The third important distinction in the case of the Ulster authority is the principle on which acquisitions are to be carried out. Under the British Act it is by compulsory vesting, and vesting orders, but in Northern Ireland it is by voluntary agreement, except in the case of the Northern Ireland Road Transport Board which was formed in 1935 by the compulsory acquisition of the Northern Ireland passenger bus services and what would correspond with "A" and "B" lorry licence holders in England.

The new undertaking will be formed in the first instance by the merger of this undertaking with the Belfast & County Down Railway, following a voluntary agreement entered into between that railway and the Government recently for its purchase. Thereafter, as already indicated, no further undertakings can be acquired except by agreement between the authority and the owners of the concern, and such agreement does not come into operation until approved by the Minister of Commerce and ratified by a resolution of both Houses of Parliament.

The possibility of frustration as the result of independent operators holding out against acquisition is not so great as might be imagined, first, because the road services, with the exception of those of Belfast City, have already been acquired by the old board, and, secondly, because the remaining railway companies operating in Northern Ireland appear on the whole to be desirous of acquisition.

In the case of one of these, the Northern Counties Committee of the old L.M.S.R., terms have been agreed, and merely require ratification by Parliament. This, in practice, leaves only the Great Northern Railway services to be dealt with, although this acquisition may present some difficulty because one-third of the system is in Eire.

The fourth major distinction as compared with the position in Great Britain is in the matter of the reviewing of rates, charges, and conditions. As in the case of Great Britain there is to be a transport tribunal, but the procedure and principles will be somewhat different. In the past, there has been nothing in Northern Ireland to correspond with the railway charges schemes for the settlement of standard charges and revenues, which arose out of the regrouping of the railway companies of Great Britain in 1921. In practice, both on the road and rail side operators have complete freedom to raise, lower, and vary their charges from time to time, and these automatically came into operation on due notice being given in the press, unless some trader, or association of traders or persons, lodged a complaint with the tribunal, in which case the tribunal could make such order as it thought fit.

A feature of the Northern Ireland Act is the continued absence of elaborate charging schemes, and the procedure before the Ulster tribunal also continues to be on much simpler lines than in Britain. The new authority and any independent railways will carry on as heretofore in the interim period, but within a time limit to be determined by the new tribunal they will be required to submit separately or independently scales of maximum charges both for passengers and freight, classifications of merchandise, and standard conditions of carriage, which the tribunal, in a public hearing, will then confirm, either without or with modifications.

Thereafter, the tribunal must make a general revision of these matters every three to five years, but the authority and the unacquired undertakings may vary their charges within the maximum, and where they think fit may carry subject to special contract, which can exclude standard conditions. Any person or association of passengers or traders may take any complaint they think fit to the tribunal, which has full jurisdiction to hear it.

A provision was inserted in the British Act whereby a quota only of its requirements of road vehicles may be manufactured by the Commission, thus requiring the balance to be bought from the trade. In Northern Ireland there is no such limitation and, in theory, the Ulster authority may manufacture all its own requirements, although, in practice, on account of the much smaller size of its undertaking, it is unlikely to do so.

Another feature of the Ulster Act is the absence of detailed compensation clauses to protect stock and shareholders, which presumably arises out of the likelihood of all the undertakings being acquired for a cash payment. The private railway wagon system, which was such a feature of the British Railways, did not obtain in Northern Ireland and, accordingly, provision for the acquisition of such wagons and compensation of the owners did not require to be made as in Great Britain.

As regards canal and inland waterway operation, there are not many canals in Northern Ireland and, in any case, they are practically unused, so that there is nothing in the Irish Act corresponding with Sections 35-37 of the British Act, which makes the Commission the licensing authority for the canals, gives a right to acquire canal carriers, and provides for abandonment.

In Northern Ireland, road services, passenger and freight, with the exception of Belfast City, have already been acquired by the existing Road Transport Board and will pass to the new authority; accordingly, there is nothing in the Irish Act to correspond with the road acquisition clauses of Part III of the British Act, where the majority of the road undertakings have yet to be acquired.

As regards carriage for hire or reward in Northern Ireland, the authority is itself the licensing body, and there is nothing to correspond to the "A" and "B" licence-holders in Britain, so that the provisions of Sections 52 to 61 of the British Act, relating to such matters, do not find any counterpart in the Ulster Act.

As to harbours and docks, the Ulster authority is given power only to own such, strictly as incidental to the purposes of its business, but it has no power or responsibility to make schemes for harbours, such as are envisaged by Sections 66-69 of the British Act, nor are there any clauses to correspond with Sections 70 and 71 of the British Act, relating to coastal shipping, although the authority has certain powers, subject to the approval of the local Ministry, to operate ships.

The financial clauses of the Ulster Act follow broadly the same lines as the British Act, although as might be expected for such a small area, they are much more simple. An interesting difference is that, in Britain, the auditors of the Commission are to be appointed annually by the Minister, whereas in Northern Ireland they are to be appointed by the authority itself in the usual commercial manner, subject to approval.

Part V of the Ulster Act relating to superannuation, compensation, and conditions of employment, corresponds fairly closely with Part VII of the British Act which deals with the same matter, and there are no important distinctions.

Finally, on account of the voluntary nature of the acquisitions in Northern Ireland, there is nothing to correspond with Part VIII of the British Act, which provides for the settlement of questions arising in connection with compulsory acquisition and for the establishment of an Arbitration Tribunal.

LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

Size of British Railway Wagons

Metropolitan-Cammell Carriage & Wagon Co. Ltd.,
Metropolitan Road,
Saltley, Birmingham, 8. August 9

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—With reference to Mr. E. R. B. Roberts's letter under the heading of "Railway Wagons" in your issue of July 23, 1948, your correspondent from St. Neots may be familiar with what railways want or do not want, but I take the strongest exception to his reference to the wagon-building industry in this country, with which he is obviously unfamiliar.

He is apparently not aware that the big wagon builders in Great Britain live largely on the export trade, and are laid out particularly for the building of high-capacity bogie wagons, for which, in fact, they have large orders in hand at the present time; obviously, therefore, they would welcome the adoption of a bigger-capacity wagon in this country. Whether or not it is required for British traffic conditions is another matter, which is for the railway authorities to decide.

Yours faithfully,

A. J. BOYD,
Chairman, The Railway Carriage &
Wagon Builders' Export Group

Charles Roberts & Co. Ltd.,
Railway Wagon Works,
Horbury Junction,
nr. Wakefield, August 4

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—If your correspondent, Mr. E. R. B. Roberts, has time to write such rubbish as appears in his letter to you dated June 28, it may, as he suggests, find entertainment for your readers, but I have no time or inclination to contribute anything further on this subject.

I distinctly stated in my letter of June 11 that his previous remarks were "not in accordance with the facts." He chooses to ignore that statement, which I repeat.

Perhaps he would explain, for the further entertainment of your readers, why, when the L.M.S. had built a small number of 40-ton self-discharging wagons for the shuttle-cock traffic to their Stonebridge Power Station, they did not proceed to build a further large number. There has been nothing, so far as I know, to prevent them doing so, had they been convinced, as your correspondent suggests, that such wagons should be adopted generally.

His final statement that the failure to introduce bigger wagons is due to the attitude taken up by the colliery proprietors, wagon builders, etc., is sheer unadulterated nonsense, and I challenge him to produce chapter and verse to substantiate any such statement. Further, he might state what experience he has had in this country, either as a railway official or as a wagon designer and builder.

Yours faithfully,

DUNCAN BAILEY,
Chairman & Managing Director

Fares and Facilities

18, Milverton Terrace,
Leamington Spa. August 1

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—I must congratulate you on your two articles, "Shorter Trains," and "Stop, Look, Listen." They said, and said well, what many of us less influential people are thinking.

It is as obvious as a hippopotamus in a duck pond that the way to make passenger services pay is to attract passengers and—fares apart—opportunity is being missed in the way of an imaginative approach to the problem. It is not a problem that permits of delay. We hope that within a reasonable time there may be more abundant petrol. The reply lies in fast and frequent services. My car would stop in the garage if on a journey I could save half-an-hour or an hour by using a train.

At the moment the contemplation of many cross-country journeys ends frequently in a resolve to remain immobile and not to undertake them. In a letter that you published in your issue of June 4, I mentioned that the last train of the day from South Wales to Birmingham leaves Cardiff at 5.5 p.m. The Divisional Superintendent, Western Region, has since told me that "the time generally suits business travel." This is a disregard of the fact that a later train would be a convenience on a route connecting two populous areas. In any case, I myself have business friends who have gone back to the road

because of this premature curfew. In my own knowledge, too, Rugby Union teams, such as Coventry F.C., who have many fixtures with South Wales clubs, have gone over to motor coaches because they cannot get home by train.

Such instances, as you know, can be multiplied by hundreds, and there seems to be such a lack of common "gumption." Doesn't it amaze that there is not a train from Birmingham to Oxford between 10.55 a.m. and 3.55 p.m.? There is only one train a week between Snow Hill and Swindon. When we had the Bournemouth and Weymouth through trains daily, they were invariably well filled and often crowded. Their disappearance except at week-ends is a source of great vexation.

Coventry is 23 miles from Leicester. In the morning, if you leave Coventry at 10.15 via Nuncaton you arrive at Leicester at 3.22 p.m.! Of course, it is a far more dizzy pace via Rugby, for you can leave Coventry at 9.19 and get to Leicester at 10.52. The buses on this route prosper exceedingly. It is also possible to go through Birmingham in the course of a couple of hours or so. But, from every corner of the country, you could be inundated with similar exasperating instances.

I am convinced that if the Executive came to bold decisions of policy on the lines you have so lucidly suggested, it would be good for the public and good for the railways.

May I suggest that sometime you take up again the question of first class invasions by non-payers of first class fares? Many bad instances of this continually occur in the Midlands. On a recent journey of mine from London, four railway clerks got into the first class compartment at Banbury, spread an overcoat across their knees, hemming me into a corner, and played solo whist all the way to Birmingham. The Executive should now make it clearly understood that the use of a first class seat demands the payment of a first class fare at all times. Otherwise let the class be abolished altogether—and face the loss of revenue. Selling first class tickets when the accommodation has been filled by holders of third class tickets, strikes an ordinary man as very near to obtaining money by false pretences.

Again let me say how I appreciate the strong and vigorous lead of *The Railway Gazette* in such matters.

Faithfully yours,
GILBERT DALTON

"Shorter Trains and More of Them"

The Railway Executive,
Eastern Group Operating Office,
Marylebone Station,
London, N.W.1. July 28

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—The arguments adduced for more and shorter trains in the article bearing the above heading which appeared in your publication dated July 16 are by no means convincing, and indeed they are not only illogical in some respects, but they also fail to appreciate the requirements of the travelling public.

The heavy trains which are considered so objectionable are the long-distance expresses consisting of 14 or 15 coaches with a tare generally rather less than 500 tons. It is true that to the casual observer they appear rather unwieldy, but when one considers that such trains make a very limited number of stops the difficulties in dealing with them are more apparent than real.

Having stated in the second paragraph that a reserve of power does not permit of lost time being regained because of the possibility of the sections ahead being occupied, the view is expressed that the running of a more intensive service of smaller trains hauled by locomotives with a relatively smaller reserve of power would lead to improved punctuality. Not only is such an argument contradictory, but it is not founded on fact. If the power ratio to the load is to be reduced, then the possibility of achieving punctuality must be reduced. It is not only a question of making up lost time, but also the need to have power in reserve to contend with adverse weather conditions, greasy rails, inferior coal, etc., and surely it is not seriously contended that the running of additional trains would lead to improved punctuality. If this were the case one would expect the trains on Saturdays in summer and at Bank holidays to show the best results, but they are notoriously late on the peak days.

The article makes reference to some of the arguments against the suggestion, but omits two of the most important ones. First, there would be an appreciable increase in coal consumption. Certainly there would be some reduction in the consumption per mile with lighter trains, but this would be very small in comparison with the fuel required for the additional mileage which is envisaged. Secondly, the primary aim of any timetable should be to provide for the passengers the kind of service best calculated to meet their requirements, and there

can be no doubt that a fixed interval service of short trains spaced evenly throughout the day would be quite unsuited to such long-distance traffic.

It is so easy to say that such an arrangement would result in a "far better use of engines, carriages and men," but it is noteworthy that no evidence is given in support of this statement, and one can only assume it has been based on the results of shorter distance interval services, without due consideration having been given to the different circumstances which apply when an attempt is made to apply the same principles to trains running over distances from 250 to 400 miles. If these considerations are examined in relation to the Kings Cross-Newcastle-Edinburgh working the position would be found to be somewhat as follows:—

(a) Engines—most of the locomotives are diagrammed to undertake a day's work for two sets of enginemmen, and it would be impracticable to improve on this as some margin must be allowed for locomotive duties between the men's shifts. The possibilities of effecting an improvement are therefore restricted to the few cases where locomotives are not already double shifted.

(b) Carriages—there can be little doubt that the user of carriages would be less advantageous and that additional restaurant and brake vehicles would have to be built. It will be obvious that as similar brake and kitchen accommodation has to be provided on a ten-coach train as in a 15-coach formation the percentage of ordinary seating is reduced. Furthermore, on an eight-hour run between Kings Cross and Edinburgh it would be impracticable to get more than one trip per day out of a train set, whilst so far as the Kings Cross-Newcastle service is concerned, the up morning trains already work to London and back the same day, and any further out and home working which might be largely confined to the new services necessitating the provision of additional train sets.

(c) Men—the principal staff concerned are the locomotive crews and they are entitled to mileage payments. Any improved rostering which might be possible would not, therefore, result in a monetary saving, and it is true to say that the wages costs would go up in almost direct ratio to the additional mileage operated.

Particular reference has been made to the need for an hourly service throughout the day between Kings Cross and Newcastle with the extension of five or six through to Edinburgh and with three or four of them routed via Stockton and Sunderland. It is apparent that a service of at least twelve day trains is visualised, and probably what is contemplated is a service starting about 8 a.m. with departures at hourly intervals until, say, 8 p.m. Presumably such a service would operate during the winter months, and it appears reasonable to compare the suggested arrangement with the service which was operated during the winter of 1947/48 as follows:—

Shorter train		Actual Service, Winter, 1947/48	
Kings Cross Dep.	To	Kings Cross Dep.	To
8.0 a.m.	Edinburgh	9.30 a.m.	Edinburgh
9.0 a.m.	*Newcastle	9.50 a.m.	Newcastle
10.0 a.m.	Edinburgh	10.0 a.m.	MSO Edinburgh
11.0 a.m.	Newcastle	11.30 a.m.	Edinburgh
12 noon	Edinburgh	12.20 p.m.	Newcastle
1.0 p.m.	*Newcastle	1.0 p.m.	Edinburgh
2.0 p.m.	Edinburgh	3.10 p.m.	FO Newcastle
3.0 p.m.	Newcastle	3.30 p.m.	Newcastle
4.0 p.m.	Edinburgh	5.30 p.m.	Newcastle
5.0 p.m.	*Newcastle		
6.0 p.m.	Newcastle		
7.0 p.m.	Newcastle	7.0 p.m.	Aberdeen
7.10 p.m.	Aberdeen (Sleeper)	7.30 p.m.	FO Aberdeen
8.0 p.m.	Newcastle		

* Via Sunderland

† Pullman service introduced July 5

On this basis the total weekly mileage from Kings Cross to Newcastle and Edinburgh last winter was 17,877 compared with 27,183 miles under the shorter train arrangement, an increase of 9,306 miles in the down direction or 52 per cent. Taking the low figure of 42 lb. of coal a mile for the additional mileage in both directions, there would be an increase of over 350 tons per week in coal consumption on the Kings Cross-Newcastle-Edinburgh day service.

Now, as regards the point of view of the public, the winter service was designed to suit the main streams of traffic at the time when it is most convenient for people to travel, and the first train out of London was at 9.30 a.m. It seems unnecessary to mention the fact that few passengers live in the vicinity of Kings Cross. Most of them have at least an hour's journey before reaching the main-line terminus, and they are not at all anxious to leave their beds at 6 a.m. on a winter's morning to get to Kings Cross for an 8 a.m. departure to Newcastle or Edinburgh. Hitherto they have had a choice of 9.30 a.m. or 10 a.m. trains, but if the interval arrangement was adopted,

many of the passengers presenting themselves for the 10 a.m. departure would find it impossible to obtain accommodation and they would be compelled to wait for the 11 a.m. or 12 noon trains.

The reason for the popularity of the 10 a.m. departure is surely obvious—it gives reasonable time to get to Kings Cross from the suburban districts without seriously upsetting one's normal domestic arrangements, and it gives a convenient arrival in Newcastle and Edinburgh permitting those who are going beyond these points to complete their journey the same day.

As for the remainder of the day traffic to Scotland the 1 p.m. service is more than adequate and the number of through passengers conveyed is relatively small. The reason is that an arrival at 9.32 p.m. in Edinburgh is too late for many people as they have a further journey to make after arriving there. Any day service to Edinburgh from Kings Cross leaving later than about 1.30 p.m. would be of little value unless it was in the nature of a high-speed train. The 10 a.m. departure from Kings Cross always has been and always will be the most popular time for day travel to Scotland and it is not the slightest use offering services at 4 p.m. or 6 p.m. with an arrival after midnight, when all local transport has ceased.

The same considerations apply, although not with quite the same force, in the case of the Newcastle traffic. Here again 10 a.m. is the most popular departure time, but the shorter distance makes it convenient for many people to travel at the mid-day and 5 p.m. periods. After this time the arrival in Newcastle is too late and those who cannot catch the 5.30 p.m. service prefer to travel overnight—even the 5.30 p.m. service is considered too late by many passengers and here again services after 5.30 p.m. would be quite useless.

As for the suggestion that three or four trains should run from Kings Cross to Newcastle via Stockton and Sunderland, it has been proved on many occasions that such services are not attractive. To the passenger for Newcastle and beyond they are too circuitous and the journey time is too long, whilst to those for Tees-side the convenience of the departure time is the governing factor, and a journey involving a change at Darlington would be preferred to an hour's wait at Kings Cross for a through train—such trains would most certainly be very lightly loaded and they would also nullify the advantages of the interval departures for the Darlington and Newcastle passengers.

It is suggested that frequency of service would compensate for the loss of high-speed trains and non-stop runs, but this is definitely not the case when applied to the long-distance traffic from Kings Cross to Edinburgh. In point of fact roughly 70 per cent. of the day-time passengers travel by the 10 a.m. series from Kings Cross and their particular requirements are comfort and speed—they would have little interest in interval services leaving after 12 noon and landing them at their destinations at a most inconvenient time. Even under the best conditions such lengthy journeys are very tedious to most passengers and it would be a retrograde step to introduce additional stops which can be avoided. As regards the Kings Cross-Newcastle day traffic, the most consistent public demand is for a reduction in the number of intermediate stops, and there can be little doubt that a service designed to give suitable departure times and the longest possible runs without stopping, best meets the requirements of the majority of passengers.

Timetable revision may or may not be necessary but whenever alterations are contemplated, surely the ruling factor should be to give passengers the kind of service they require at the times which suit them best. In my opinion the substitution of the present day-service between Kings Cross, Newcastle, and Edinburgh by an interval service of shorter trains would not meet this obligation.

Your faithfully,

H. HOYLE

[We appreciate our correspondent's long letter, although in our opinion he does not "see the wood for the trees." His letter, too, has given us quite a feeling of nostalgia. It so recalls the arguments presented by those who opposed the G.W.R. timetable revision of 1924—"nothing could be improved." Concerning his comments on engines and men, we would refer him to the article "Big-Engine Policy" in our April 2 issue. The silver lining to the cloud of railway nationalisation is the great opportunity now presented for a complete timetable revision to meet the new conditions—shorter trains and more of them.—ED. R.G.]

CANADIAN GOODS RATES INCREASE.—The Canadian railways have filed an application with the Board of Transport Commissioners for an interim 15 per cent. increase on goods carriage rates, to be followed by a permanent increase of 20 per cent. The chief reason for the application is the recent increase in wages of 170,000 railway employees.

The Scrap Heap

ROUND AND ROUND

Some excited small boys in an underground train soon made it clear to the other passengers that they were joy riding, and from their conversation it emerged that this was their third round.

The conductor, a jovial sort of fellow, was sympathetic. "This is their second round with me," he said. "When their ticket was exhausted, they dashed upstairs, bought another, and caught this train before it left."—From "An Editorial Diary" in "The Glasgow Herald."

TRIBUTE TO STEPHENSON

One of the famous "Patriot" class locomotives of the London Midland Region is to be named *Stephenson*, in honour of George Stephenson, whose death is being commemorated by a Centenary Exhibition at Chesterfield from August 12 to 15. The occasion specially has been selected for this tribute and it was thought only fitting to choose an engine of this class to bear the name of one who contributed so much to the nation's history. The engine selected is No. 45529 and it is the fourth of a long line of locomotives built at Crewe to carry the name *Stephenson*. This was one of the traditional names used by the L.N.W.R. and was given to a small 2-2-2 Trevithick-Allan passenger engine in 1851, which weighed only 18½ tons, compared with a weight of 82 tons, without tender, of the "Patriot."



Sign at Paddington Station at the entrance to the offices of the Superintendent of the Line

The Great Western Railway (now British Railways, Western Region) has been unique among the four main-line railways in retaining since grouping in 1923 the title of Superintendent of the Line for one of its principal officers. See also pages 182 and 183

100 YEARS AGO

From THE RAILWAY TIMES, Aug. 12, 1848

NORTH-WESTERN RAILWAY COMPANY.—NOTICE is hereby given, that the next ORDINARY HALF-YEARLY GENERAL MEETING of Shareholders of the North-Western Railway Company will be held at the Devonshire Hotel, in Skipton, in the West Riding of the County of York, on THURSDAY, the 31st inst., at Eleven o'clock in the forenoon, and that immediately after the said meeting a Special Meeting of Shareholders of the said Company will be held at the place aforesaid, for the purpose of confirming the forfeiture of certain shares which have already been declared forfeited by the Directors.

PUDSEY DAWSON, Chairman.
WM. WHELAN, Secretary.

Lancaster, August 10th, 1848.

The books kept by this Company for the registration of transfers of shares will be closed on Monday, the 31st instant, and will remain so until after the meeting on the 31st instant.

TROUBLED WATERS

When the coal shortage was acute, the Government urged steel makers to convert as much of their plant as possible to the use of oil. We responded immediately to this appeal and altered a melting shop at Motherwell from the use of coal to oil fuel.

This has involved an expenditure of about £500,000 and the alteration was carried through without interrupting production. We completed a similar conversion at Clydebridge, but quite unexpectedly the price of oil was increased in September, 1947, by £1 15s. per ton, and again by £1 per ton in February of this year. These increases not only eliminated any

benefit from the use of oil, but also added substantially to the fuel cost of steel melting.

We had commenced to convert the furnaces at Hallside Works in the same way, when, after a considerable amount of money had been spent and the plant installed, we were informed that the amount of fuel oil available was insufficient for our needs there, and the scheme had to be abandoned. This illustrates the difficulties arising from State intervention in industrial matters.—From a statement by Sir John Craig at the annual meeting of Colvilles Limited.

DISEASED MINDS

London Transport Police and plain-clothes men are on the look-out for persons participating in a further epidemic of wilful damage to the upholstery and fittings of buses, trolleybuses and trams. A recent example of these acts of vandalism was the slashing of five seats in one of the newest 8-ft. wide trolleybuses, when one of the seat cushions was given five cuts, up to 11 in. long. The replacing of damaged and mutilated fittings is particularly difficult, and it usually is necessary to take vehicles out of service at a time when they can be ill-spared. London Transport would be glad if passengers helped to stamp out this epidemic by informing the conductor at the time, should they witness one of these acts of wanton and malicious destruction.

OPENED RAIL CROSSING GATE WITH KNIFE

A boy told a jury at a Pickering (N. Yorks) inquest on a man and wife killed at a railway crossing that he noticed a man opening the gates with a penknife. The man then drove his car across the lines and it was hit by a train.

The jury returned a verdict of "Death by misadventure" and found that no railway employee was concerned with the deaths of the couple. It was stated that the gate was shut for the day and was to be opened only at the request of vehicle drivers.—From the "News Chronicle."

WAIT FOR IT . . . !

(Railway police are now being trained to salute in military style)

There's a rhythmic tramp in the station yard,

Strong men are grilling "on the square";
No riot impends—they are being taught
To salute *en façon militaire*.

So—it's "up with the elbow and out with the chest

(And see that you make those eye-balls click!)

A circular swing like a Grenadier,
A brisk 'one-two,' precise and slick."

For discipline fathers the best morale—I learned that much, at least, at school,
And a smarter man makes a smarter cop—
Take it how you like—he'll be no one's fool.

Luggage lifters, you have been warned—
Pilfering prowlers, begone elsewhere!
This spit and polish affair's no joke,
They're planning your doom on the barack square.

Our Robert will be more wonderful,
With a fitter frame for his balanced mind;
The very stuff for a *corps d'élite*,
Let's hope he will still be just as kind.

A. B.

OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

WESTERN AUSTRALIA

New Perth Bus Routes

Over recent months a number of new bus routes has been inaugurated by the Western Australian Government Tramways, which operates the tramways in Perth and the metropolitan area. In some instances the buses are supplementary to existing tram or trolleybus services, while in others, new routes have been created. The new services operate between Perth and South Perth, Osborne Park, Maylands, and Jolimont, while the Government has also announced that when a new causeway now under construction over the Swan River is complete, the existing tram services to South Perth and Victoria Park will be replaced by double-deck omnibuses.

Fifty trolleybuses on order from England are expected to reach this State during the current year, and these will be used to augment existing trolleybus services and to replace trams and operate new routes where this means of transport appears advantageous.

INDIA

Fire at New Delhi Station

The probable cost of the damage caused by a recent fire at New Delhi station has been estimated at Rs. 25,000. The cause of the fire, in which 90 drums of motor spirit, a goods wagon, and a part of the permanent way were burnt, is now under inquiry by two senior officers of the Eastern Punjab Railway.

Ticketless Travel on B.N.R.

A sum of Rs. 108,333 was collected from persons detected without tickets, or travelling with irregular tickets on the Bengal-Nagpur Railway during April, 1948. Out of a total of 52,948 cases detected, 33,148 were of travelling without tickets, and 19,800 of travelling with irregular tickets.

PAKISTAN

Food Trains for India

Two special food trains, loaded with about 1,000 tons of wheat, were despatched recently from Karachi for Jodhpur and other places in the Indian Dominion via the Jodhpur Railway, for the first time since the partition of India. These trains carried imported Australian wheat, originally intended for Pakistan, which, it is learned, offered it to India.

SOUTH AFRICA

Five-Day Week for Artisans

A five-day working week for railway artisans and for grades of staff employed in direct association with artisans has been introduced as from July. The change has been under investigation for some time, but many administrative difficulties had to be solved first.

The five-day working week will be introduced for bridge construction staff; the flash-butt welding depots at Elandsfontein and Danskraal; the tarpaulin factory at Point, Durban; electrical construction depots; telegraph construction gangs; the central electrical workshops, Langlaagte; the motor repair shops, Langlaagte; artisan staff in the Stores Department; at cartage depots; and for artisan staff of the Publicity & Travel Department.

Maintenance and construction artisans,

and other staff who are employed frequently away from their headquarters, will also have the long week-end provided they work the appropriate time during the period Monday to Friday, and are employed at a point from which it is possible for them to go to their homes and return to their places of employment in time to begin work at the normal time on Mondays.

Where circumstances do not permit of visits home being made every week-end, arrangements have been made for the men concerned to work the necessary time so as to qualify for a week-end at home either every fortnight or every month.

Motive Power Deliveries

Three of the "S1" shunting engines being built by the S.A.R. at Salt River have now been placed in service. A fourth engine is nearly completed and will begin work this month. During April, four Class "15F" steam locomotives were received in the Union, bringing the total delivered to 96 out of 100 ordered. Of 28 electric locomotives ordered, 20 have been delivered.

CANADA

Refrigerator Cars

The first of a series of fifty express all-steel refrigerator cars for special express service on the Canadian National Railways has been turned out by the company's Transcona Shops. The new cars are the latest type of construction and with a weight of 74,000 pounds they will take a load limit of 85,000 pounds.

An order for 500 overhead refrigerator cars for the Canadian Pacific Railway is now being delivered at the rate of 12 per day by the National Steel Car Co. Ltd., Hamilton, Ont. When completed, the order will bring to almost 4,000 the number of refrigerator cars now in C.P.R. service, of which 1,437 are the overhead type cars, augmenting a fleet of over 2,500 end-bunker refrigerator cars bearing C.P.R. markings. With ice-trays along the roof of the car, the overheads differ from the end-bunker cars, in which the ice is loaded into bunkers at the end of each car.

UNITED STATES

Long-Term Freight Rates Increased

The Interstate Commerce Commission recently granted long-term freight rate increases to the railways and water carriers in place of the present temporary 25 per cent. "emergency" increases granted last October. The Commission said it had adjusted these temporary increases upward for some items and downward for others, with the net result that the railways will receive about \$65,200,000 more revenue than at present.

Chicago Railroad Fair

On July 20 a Railroad Fair was opened at Chicago, occupying a site covering some 50 acres. One of the principal attractions is a "Wheels a-Rolling" pageant produced on a 450-ft. stage. Other exhibits include: specimens of the Chicago, Rock Island & Pacific Railway's "club diner" and "observation sleeper" cars; replicas of the latest sleeping car accommodation provided by the Pullman Company; a replica of the first railway

depot in Chicago, built and exhibited by the Chicago & North Western Railway; and an extensive exhibit by the Burlington-Rock Island Railroad and the Great Northern and Northern Pacific Railways jointly, covering some 1½ acres. It includes a working replica of *Old Faithful*, stage coaches, Indian tepees and live bears. It is stated that about £500,000 has been spent in preparing the various exhibits and shows. The fair is due to close on September 6.

Ballot on Suburban Coaches

Season ticket-holders on the Central Railroad of New Jersey have been invited to vote on new schemes of interior decoration for the company's rolling stock. Four coaches have been on exhibition, representing different colour schemes, types of upholstery, an altered seating arrangement, and ceiling decoration. The schemes which receive the highest number of votes will become standard for all the company's coaches.

ARGENTINA

Ticket Frauds by Guards

The Federal Police have arrested a number of guards who have been defrauding the railway systematically by allowing passengers to travel without tickets, in exchange for payments smaller in every case than the proper fare. No ticket inspectors have been implicated.

Safety First

The Argentine railways, in connection with a national "Safety First" campaign launched at the beginning of June, have advised the public to bear in mind a number of points when travelling by train, so as to help minimise accidents due to passengers' own carelessness. Among other things, travellers are advised to "stop, look and listen"; to refrain from getting in or out when the train is in motion; not to walk on the line; not to get out of the train on the wrong side; and not to try to enter trains before passengers have alighted. Posters addressed to employees and passengers were distributed to all stations.

ROUMANIA

New Railway Connections

A main line in Eastern Roumania, approximately 55 miles long, connecting Faurei with Tecuci, was opened to traffic recently. It forms an extension of the Bucharest-Urziceni-Faurei line opened in March, 1944, as reported in *The Railway Gazette* of May 12, 1944, and is designed to improve communications with North-Eastern Roumania and the Soviet Union.

In the south-west, the building of a 19.3-mile link between Bumbesti Jiu and Livazeni is reported to be nearing completion. Part of the line has been opened to traffic already. Bumbesti Jiu is the terminus of a standard-gauge branch from Filiasi (on the Craiova-Turnu Severin main line), while Livazeni is to the north of the Carpathians on the line connecting Simeria (on the Arad-Brashov main line) with Lupeni.

Livazeni is 7½ miles north-east of Lupeni. Because of the configuration of the valleys, it was impracticable to make the connection at Lupeni. The new line is of importance not only because it improves connections with Transylvania, but also because the Livazeni, Petrosani, and Lupeni areas contain the most important coal workings in the country.

Superintendent of the Line

Some notes on the organisation of the office of Superintendent of the Line, Great Western Railway, now Western Region, British Railways

THE post of Superintendent of the Line as a separate office dates from 1864, although its beginnings can be traced to 1840, when it was agreed to appoint an officer for the general superintendence of the traffic, and Mr. C. A. Saunders, the Secretary of the Great Western Railway Company, was redesignated Secretary & General Superintendent of Line. The organisation developed with the growth of the Great Western system, and at the time of vesting the Superintendent of the Line controlled ten traffic divisions and two districts jointly with the Chief Goods Manager.

The basic idea of overall control of traffic requirements, both operating and commercial, so far as passenger traffic is concerned, has obtained throughout the history of the organisation.

A Divisional Superintendents' Conference was established in 1867 and has continued until the present day.

The Locomotive Running Superintendent (located at the Headquarters of the Chief Mechanical Engineer at Swindon) is jointly responsible for certain locomotive running matters to the Chief Mechanical Engineer and the Superintendent of the Line.

The following notes supplement the information shown on the chart as to the duties in the various sections:—

Passenger Train Working

This department is responsible for the following:—

The timing of the undermentioned services:

Royal trains.

Special and excursion trains (including race trains).

Military and other service specials.

Divisions and reliefs to ordinary trains.

Fish, milk, and perishable trains.

Swindon works annual holiday trains.

Agricultural show trains and horse box specials.

Specials for private parties.

Other services of a temporary character (organised on a 24-hour basis).

Review daily by telephone and scrutiny of the guards' journals, the actual working of trains.

Coach and van working.

Loading, stowing, and working of parcels traffic.

Arrange in conjunction with Timetable Section where necessary timing alterations necessitated by features brought to light by investigation of actual working of trains.

Timetables—Special Traffic

Responsible for preparation and issue of public timetable.

Timing of all public book trains, also regular workmen's services, newspaper and postal trains shown in the service books and standard ocean schedules.

Special reservations and trains for individuals and parties (not within the normal scope of cheap ticket arrangements or excursion traffic), and passengers conveyed in ocean specials and other arrangements associated with boat traffic.

Advise passenger train working section when special or additional vehicles are required on passenger and perishable services.

Newspaper traffic and "shows," also daily adjustments in milk tank working.

Requests for special stops.

Prepare instructions for issue to Divisional Superintendents on the subjects referred to above after ensuring other sections fully informed.

Freight Trains and Traffic Working

Overriding control of freight operation.

Arrangement of schedules for freight trains.

Supply of pool wagons and inter-regional distribution.

Exceptional loads.

Organised on a 24-hour basis to keep in constant touch with Divisional controls on the working of freight traffic.

All-line reports prepared twice a day showing general freight position, state of yards, power requirements, etc.

Inter-regional and regional daily telephonic conferences.

Rolling Stock Distribution

Distribution of passenger and freight rolling stock.

Liaison with R.E. Freight Rolling Stock Control.

Records of passenger and freight stock.

(Organised on a 24-hour basis.)

Guards' Working

Preparing programmes of working of guards and train ticket collectors in consultation with passenger and freight working sections.

New Works, Accidents, and Block Working

Preparation of schemes for improvements or additional facilities to give better accommodation, improved running facilities, or additional safety measures.

In recent years the provision of amenities for staff welfare has added considerably to the work of this section.

Reports of accidents and subsequent enquiries as to causes.

Signalling irregularities.

Issue of rule book and general appendix thereto; block working regulations and appendices to working timetables.

Issue of weekly speed and engineering notice.

Records of signal failures, trains parting (passenger and freight), signals passed at danger, etc.

Maintenance of long-burning signal lamps.

Telecommunications

Sponsoring of all schemes for provision of telephone and telegraph facilities, in conjunction with Signal Department.

Checking of G.P.O. telephone accounts.

General

Secretariat and personal staff.

Parliamentary subjects.

Road/Rail matters—liaison with associated road companies.

Preparation of objections to applications for road services.

Stationery and stores items.

Minutes, records.

Staff

Staff matters concerning stationmasters and clerks, signalmen, porters, shunters, ticket collectors, and all grades of traffic staff.

Claims

All claims arising on passenger-rated traffic.

Ticket irregularities, R.F.C.s, etc.

Agreements for taxis, etc., at stations.

Permission to walk on the line.

Zone ticket matters.

Cloak room charges.

Interavailability of rail tickets.

Central Enquiry Bureau

For the purpose of concentrating enquiries from the public for information respecting passenger train facilities, a Central Enquiry Bureau was set up within the organisation of the Office of the Superintendent of the Line, some 25 years ago. Thirty female and five male clerks are employed in the section at the present time, the former mainly to deal with telephone enquiries; the service is available to the public between the hours of 8 a.m. and 10 p.m.

Telephonic enquiries average just over one million yearly, whilst enquiries dealt with in correspondence approximate 60,000 a year; some 15,000 personal callers are dealt with in addition. This office also serves as a convenient medium for the issue to the public of sailing tickets, reservation of steamer accommodation, and seats in boat trains, and the issue of throughout tickets in connection with the company's steamer services to Ireland and the Channel Islands.

Rates and Charges

Fixing and quotation of rates for passenger rated traffic.

Charging and handling of parcels.

Questions of general principle respecting season tickets.

Interviews with firms, etc., re institution of agreed charges.

Town offices representation, also shows and exhibitions.

Representation on R.C.H. committees on above matters.

Services traffic.

Excursions and Fares

Responsible for commercial contacts, correspondence with the public on excursion matters.

Advise passenger train operating section requirements with regard to the special trains and when special vehicles are wanted on ordinary train services in connection with reduced fare travel.

Responsible for the issue of instructions to the Superintendents respecting the special facilities required; such notices to embody the train working arrangements agreed and supplied by the passenger train operating section, together with the appropriate particulars of the commercial and incidental requirements associated with the event or party.

Quoting of fares and supply of tickets of all kinds other than services personnel, e.g., monthly return, circular tours, bulk travel.

Arrangements for instituting cheap tickets.

Appointment of ticket agents.

Arrangements for reserved accommodation for parties travelling at reduced fares by ordinary trains and special excursions.

Questions of special fares, other than services personnel, etc., and ordering of tickets.

Arrange direct with rolling stock section and refreshment car department the allocation, etc. of special dining cars as concerning day, half-day, or guaranteed excursions (when authorised).

Continental

All matters arising in connection with

SUPERINTENDENT OF THE LINE

Assistant Superintendent of the Line

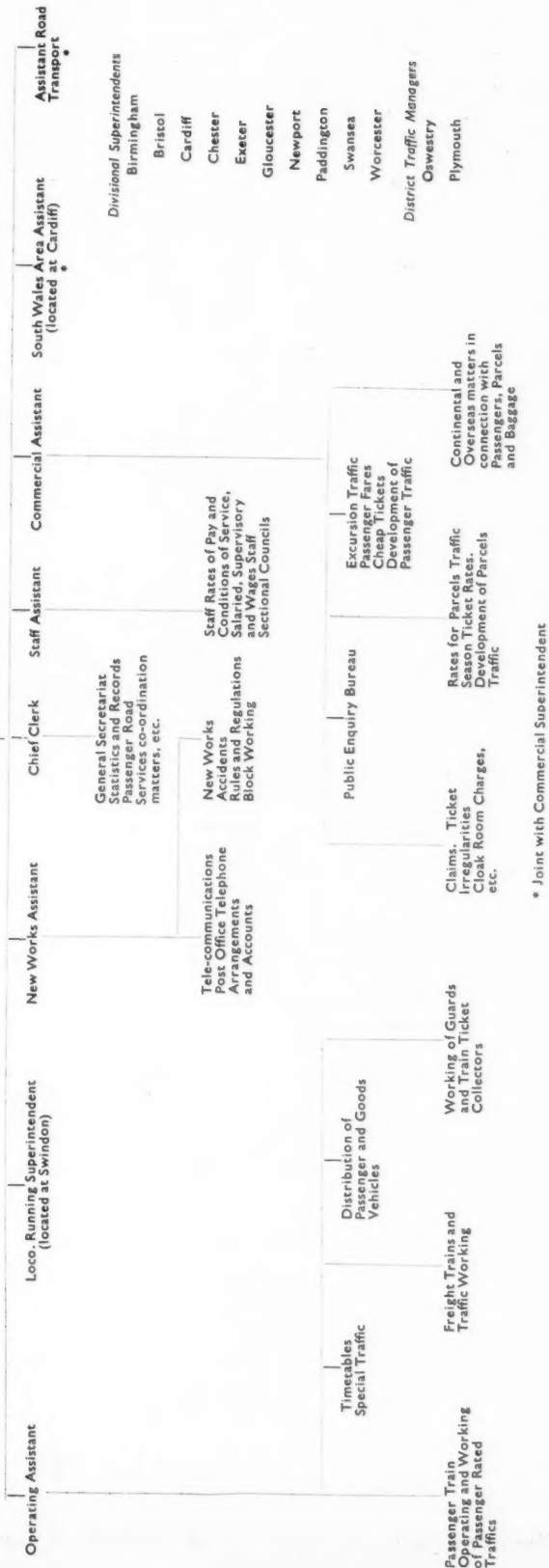


Diagram showing organisation of the office of the Superintendent of the Line, Great Western Railway, now Western Region, British Railways

through facilities to the Continent, fares, etc., so far as passenger-rated traffic is concerned.

Overseas representation.
Air travel and interavailability rail/air tickets.

Representation on I.R.C. committees, etc.

Superintendents of the Line

The first holder of the office of Superintendent of the Line, G.W.R., was Mr. G. N. Tyrrell, who was appointed in February, 1864. Previously, Mr. Charles Alexander Saunders, who had been Secretary of the London Board since 1833, after the amalgamation of that Board with the Bristol Board, was appointed Secretary & General Superintendent of Line in November, 1840, an office which he held until September, 1863. The first General Manager of the G.W.R. was Mr. James Grierson, who was appointed in October, 1863. Below is given a list of holders of the office of Superintendent of the Line from 1864 to the present day:—

George Nugent Tyrrell	February, 1864—June, 1888
N. J. Burlinson	July, 1888—April, 1894
T. I. Allen	April, 1894—December, 1903
J. Morris	January, 1904—January, 1911
Charles Aldington	January, 1911—March, 1919
R. H. Nicholls	March, 1919—December, 1932
H. L. Wilkinson	January, 1933—August, 1936
Frank Rowe Potter	August, 1936—December, 1940
Gilbert Matthews	January, 1941—

COLVILLES PLAN LARGE EXTENSIONS.—During the year every department was as fully occupied as the supply of raw materials would permit. Sir John Craig, Chairman & Joint Managing Director, stated at the recent annual meeting that steel output for the whole year exceeded that of 1946 by 5.57 per cent. This increased output, however, was achieved only by the adoption of an extended working week, and it was to the credit of the workmen and their unions in the steel industry that they had agreed to this enlightened policy. As to the future, they had submitted plans for large extensions to several of their works, and if these plans developed along the lines prepared it would involve large capital expenditure, and the directors were now giving careful consideration to the financial aspect of this matter. One of their regrets at the present time was that they were still in the unhappy position of not being able to respond to the many appeals from their old customers abroad.

RADAR FOR TILBURY—GRAVESEND FERRY.—British Railways, London Midland Region, is installing radar at Tilbury, to facilitate a better ferry service in foggy weather. The apparatus is being fitted in Riverside Station, where a picture of the river and its shipping, gathered by a revolving scanner above the clock tower, will be recorded on an indicator screen in a darkened control room. An operator watching the screen will use a wireless telephone to advise masters of the ferry steamers where they are in relation to other vessels, and their position in relation to ferry landings. The system of control will leave masters free to concentrate on their navigation, while hearing a brief running commentary from a loudspeaker at their elbow, advising them of their progress. Radar operators will be drawn from masters and mates, so that their familiarity with the work will permit working in perfect harmony with the men on the bridge. It is hoped that the radar will be in operation in time to deal with the autumn fogs.

New and Proposed Lines in Norway

Completion of projects now in hand will improve railway links in Norway, but many gaps in the system remain to be filled

will be accompanied by an improvement of the alignment so that the minimum curve radius will be increased to 20 ch. Other works concern the electrification of

(Continued on page 193)

NORWAY is one of the few countries where the railways are still in a stage of considerable and steady expansion. In fact, the rate of expansion has been almost constant since 1860. Today, Norway has a railway network of some 2,800 miles, 2,600 of which are owned and operated by the State Railways. M. Kolsrud, Chief Engineer, recently read a paper (reported in *Ingeniøren*) reviewing the latest achievements and future plans of the Norwegian State Railways. During the last two decades, railway construction has been governed by the "1923 Programme," which envisaged the construction of some 900 miles of new lines, including the Sörland Railway from Neslandsvatn to Stavanger (approximately 230 miles), and the Nordland Railway from Grong to Bodö (approximately 310 miles). Those two important lines represent outstanding examples of modern railway construction in difficult topographical and climatic conditions.

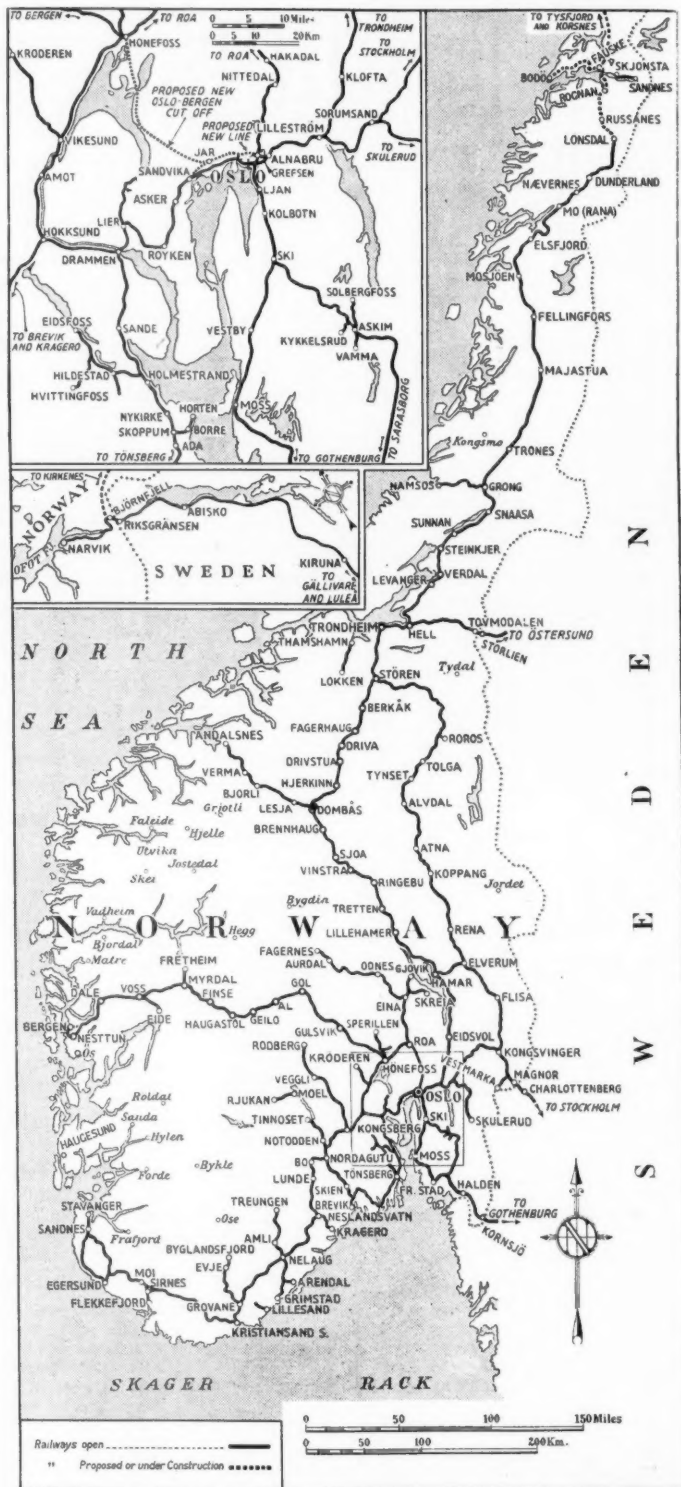
The Sörland Railway is now open throughout its whole length, but a number of important works are still outstanding. Between Kristiansand and Moi the railway cuts across several mountain ranges, and tunnels comprise 28 miles of this 67-mile sector. Among them is the Kvineshei Tunnel of 5½ miles, the longest tunnel in northern Europe. In constructing this tunnel, a new method of machine-boring was used. All the pneumatic tools, air and water pipes were mounted on a mobile sledge which formed the rear part of the shield. The rate of boring, which went on continuously over a three-shift, 24-hr. day, reached the figure of 100 ft. a week. In the case of another tunnel, water broke in from a lake 500 ft. above.

The construction of the Sörland Railway included the conversion to standard gauge of the older local railway between Moi and Stavanger, some 90 miles in length. The opportunity was taken to make improvements in the alignment, which included cutting a tunnel through the Tronaasen promontory south of Stavanger.

Linking North and South

The Nordland Railway is designed to link the lonelier stretches of the northern Norwegian coast with the populous centres of the south. The line is of special importance because many sections of the roads in that region are closed during the winter months. At the time of the German invasion in 1940, the 115-mile section from Grong, on the Namsos Railway, to Mosjøen, was nearing completion. During the Occupation the next section of 56 miles to Mo (Rana) was built. A further section of 66 miles to Lønsdal has just been taken into operation, but many engineering works remain to be completed during the summer. Among these is the conversion of the 15-mile colliery track which was originally built by a British company and now forms part of the line. None of the remaining works, however, presents any particular engineering difficulties. The largest tunnel on this line is about 1½ miles long. The construction of the remaining section from Lønsdal to Bodö is expected to take another five years at least.

Among other important railway works in progress is the double-tracking of the Sandvika-Asker section of the Drammen Railway, near Oslo. Traffic on this line, which also carries suburban traffic, has grown to 78 trains a day. The widening



Railway development in Norway to date, showing also proposed extensions

Mixed-Traffic Electric Locomotives for Holland

Wide range of operating conditions fulfilled by 1-Do-1 design with three motor combinations and weak-field control

THE Netherlands Railways before the war had electrified their principal lines, mostly in the western part of the country, with 1,500 volts d.c., forming an electrified system with a route-mileage of over 370. This system was operated with frequent motor-coach trains formed mostly of streamline stock with automatic multiple-unit control, and running to a regular-interval timetable. Services were provided every 60, 30, or 20 min., and at peak periods at even shorter intervals.

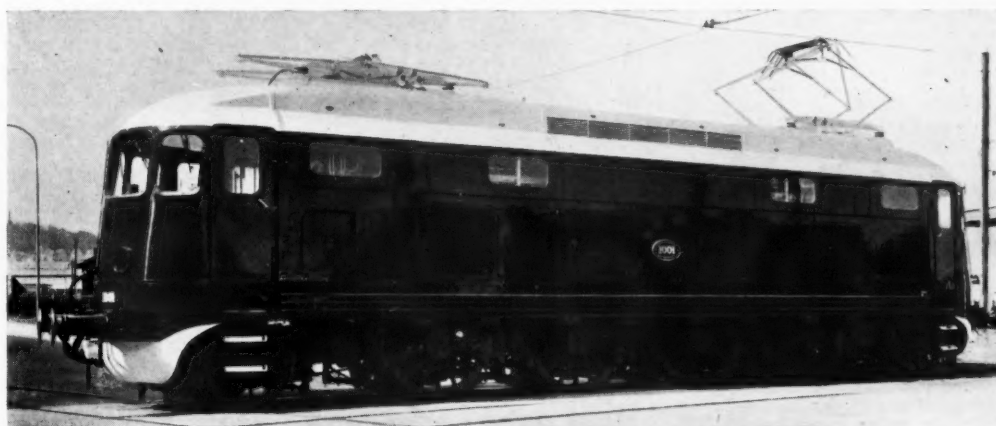
As a result of the war, the railways suffered very heavy damage. In addition to bridges, permanent way, and workshops, the majority of the electrical equipment,

Swiss industrial undertakings have played an important part in the reconstruction of the Netherlands Railways system. At the beginning of 1946 the administration placed an order with the Ateliers de Construction Oerlikon (A.C.O.) and the Swiss Locomotive & Machine Works (S.L.M.), of Winterthur, for ten 1-Do-1 electric locomotives for operation on 1,500 volts d.c. Three of these were to be built and erected in Switzerland; for the other seven, which were to be erected in Holland, Oerlikon supplied all the electrical apparatus and auxiliary machines, and the traction motors were built by two Dutch firms under licence. The

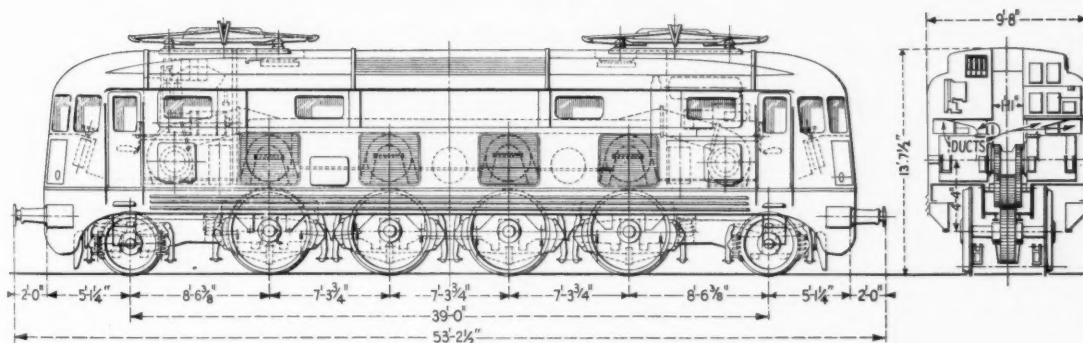
operating the heaviest goods trains, but also for heavy and light expresses up to the maximum speed of 99½ m.p.h. which is under consideration for the future.

Two of the driving axles are carried on the main frames, forming a rigid wheel-base of 7 ft. 3½ in. The remaining two run in bearings which form part of the front and rear bogie assemblies, and are allowed lateral play.

The locomotive is driven by eight traction motors, which are located above the driving wheels to the right and left of the middle of the body, and are grouped in pairs, each pair driving one axle. On each side of the central gangway, two steel racks located above the motors carry the traction current switchgear and starting resistances. The cooling air ducts are welded to the lower sides of the racks, which are 26 ft. 3 in. long and can be



One of the ten 1-Do-1 locomotives for the Netherlands Railways



Principal dimensions of the locomotive

including rectifiers, switchgear and overhead contact lines, was damaged or destroyed. The rolling stock, especially the electric motor-coaches, of which 99 per cent. were destroyed or damaged, had also suffered very heavily.

The railways began the work of reconstruction immediately after the liberation on May 5, 1945, with great energy and in spite of exceptional difficulties. After no more than a few months, the important Amsterdam-Rotterdam section had been restored to the extent that electric streamline trains were running at speeds up to nearly 78 m.p.h. on a 30-min. interval service.

mechanical parts for the latter locomotives were supplied partly by the Winterthur Locomotive Works as general contractor, working in co-operation with a Dutch firm.

The locomotives are required to be capable of continuous working on the level, at a line voltage of 1,350, of the following types of train:—

Coal trains of 2,000 tons at 37½ m.p.h.;
goods trains of 850 tons at 50 to 62 m.p.h.;
express trains of 600 tons at 62 to 81 m.p.h.;
and express trains of 400 tons at 81 to 99½ m.p.h.

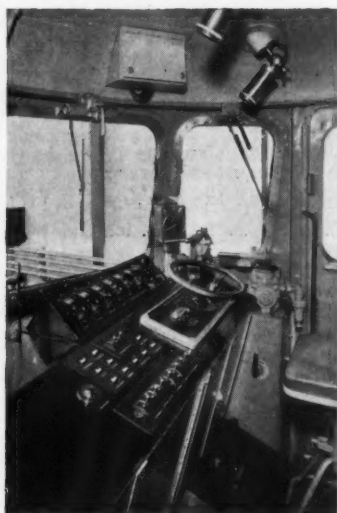
What was required was a general-purpose locomotive suitable not only for

lifted out as separate units with all the apparatus and wiring intact. As a result of this arrangement the installation and overhaul of the apparatus is facilitated.

Auxiliary equipment, consisting of four cooling fans, two compressors, a motor-generator set, a high-speed circuit breaker, and some small ancillary apparatus, are located in compartments between the apparatus racks and the driving cabs. All electrical parts are easily accessible from the central gangway, but are protected by removable screens.

The cabs at both ends of the locomotive are very roomy. Each has a broad shelf, on the right-hand side of which the

master controller is located so that it is easy to see and operate; a control switch box; the lighting switchboard; electric and air pressure meters; and Knorr and Henry brake valves. On the left-hand side there is an auxiliary master controller for the first six accelerating notches, a second Henry brake valve, and a push-button for



View of driving position, showing control desk and main controller

the dead-man's handle device. These last two items are used only when the driver drives from the left-hand side of the cab while shunting. The cab heater and the main and fuse switchboards are mounted on the back wall of the cab. The driver normally drives the locomotive seated. Current collection is by two pantographs of elliptical tube construction.

Some details of the design are given below:—

Length over buffers ...	53 ft. 2½ in.
Maximum body width ...	9 ft. 8 in.
Height of roof over rails ...	13 ft. 7½ in.
Total wheelbase ...	39 ft. 0 in.
Distance between bogie pivots ...	29 ft. 6 in.
Bogie wheelbase ...	8 ft. 6½ in.
Driving wheel, dia. ...	5 ft. 1 in.
Carrying wheel, dia. ...	3 ft. 7½ in.
Gear ratio of individual axle drive ...	1 3:56
Number of traction motors ...	8
Drive ...	S.L.M. Universa

	Continuous	1-hr.
Power at motor shaft—		
kW. ...	2,800	3,296
h.p. ...	3,800	4,480
	lb.	lb.
Traction effort at wheel tread ...	20,283	25,133
	m.p.h.	m.p.h.
Corresponding speed...	67	63½
Weights—		Tons
In working order ...		100
Available for adhesion ...		728
Load on driving axles ...		18
Load on carrying axles ...		14

It was necessary to adapt the operating range of the locomotive to widely differing conditions. By means of suitable switching arrangements and motor design, also the use of field-weakening, the following three traction motor groupings are possible:—

1.—Series connection with all eight motors connected in series.

2.—Series-parallel connection with two parallel groups, each of four motors in series.

3.—Parallel connection with four parallel groups each of two motors in series.

Sixteen resistance and four weak-field notches are available with each grouping, giving a total of 60 notches.

Express trains will be worked with the parallel motor connection; others with series-parallel. Series connection is for starting from rest and shunting. The transition, resistance, and weak-field switching is performed by separate electro-pneumatic contactors. Four electro-pneumatic reversers control the direction of running of the locomotive. In the event of a breakdown, it is possible to isolate a defective motor electrically simply by operating its reverser by hand to the neutral position.

Every motor group is protected from overloads by an over-current relay, while all power circuits are protected against short-circuits by an automatic high-speed circuit-breaker.

The traction motors are six-pole d.c. series machines, with interpoles, designed for a voltage of 675 and 560 h.p. at the 1-hr. rating. Each pair of motors coupled to a driving axle is connected permanently in series.

For maintenance purposes, the motors

can be removed and installed through the side of the body in a very short time. The traction motors are cooled by four fans driven by 10-h.p. motors. Air exhausted from the traction motors is used for cooling the starting resistances, and then finds its way out into the open air through ventilators in the roof.

Motor-Generator Set

A motor-generator set, consisting of a 1,500-volt motor and a shunt-wound generator for a 3.5-kW. output, supplies the power necessary for control, lighting, window-heating, cooking and oil-heating, and for charging the 30-cell cadmium-nickel battery. The generator output is 48 volts, and is kept constant by an automatic high-speed voltage regulator.

In building the locomotive, advantage has been taken of the latest advances in technique, and its low weight was achieved only by making full use of electric arc welding and careful attention to design. The first locomotive was put into service in Holland on April 15. Test runs have demonstrated already that the machine fulfils the design requirements. Running is notably smooth at the highest speeds of which the locomotive is capable.



The traction motors can be removed and replaced through apertures in the side of the locomotive body

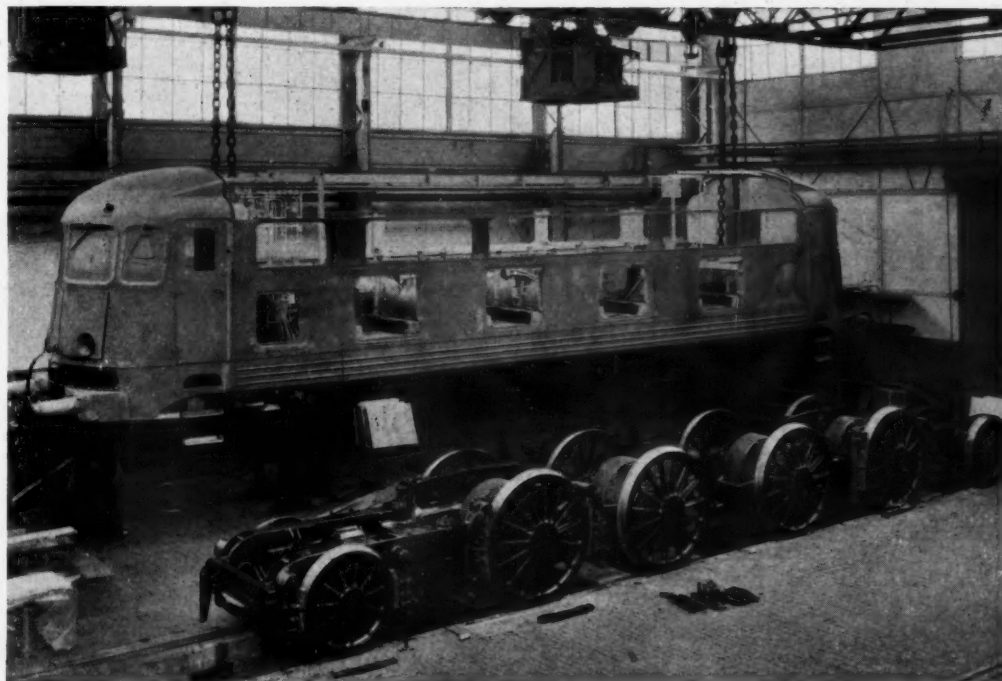
OVERHEAD LINE EQUIPMENT MAINTENANCE VEHICLES.—An order has been placed with the Drewry Car Co. Ltd., River Plate House, Finsbury Circus, London, E.C.2, for two overhead line equipment maintenance vehicles, fitted with elevating towers, for service on the Liverpool Street-Shenfield electrified line of the Eastern Region, British Railways. These vehicles will be powered by 68-h.p. Gardner oil engines.

ELECTRIFIED SERVICES IN AUSTRIA.—Passenger traffic on the Austrian Federal Railways electrified lines, where train services are more frequent than on the steam-operated lines, has now reached the level recorded for 1937. On the steam-worked lines, however, it does not exceed 42 per cent. of the 1937 total. Electrification on the 34-mile double-track section Linz-Attnang-Puchheim (55 km.), of the Vienna-Innsbruck main line, which ought

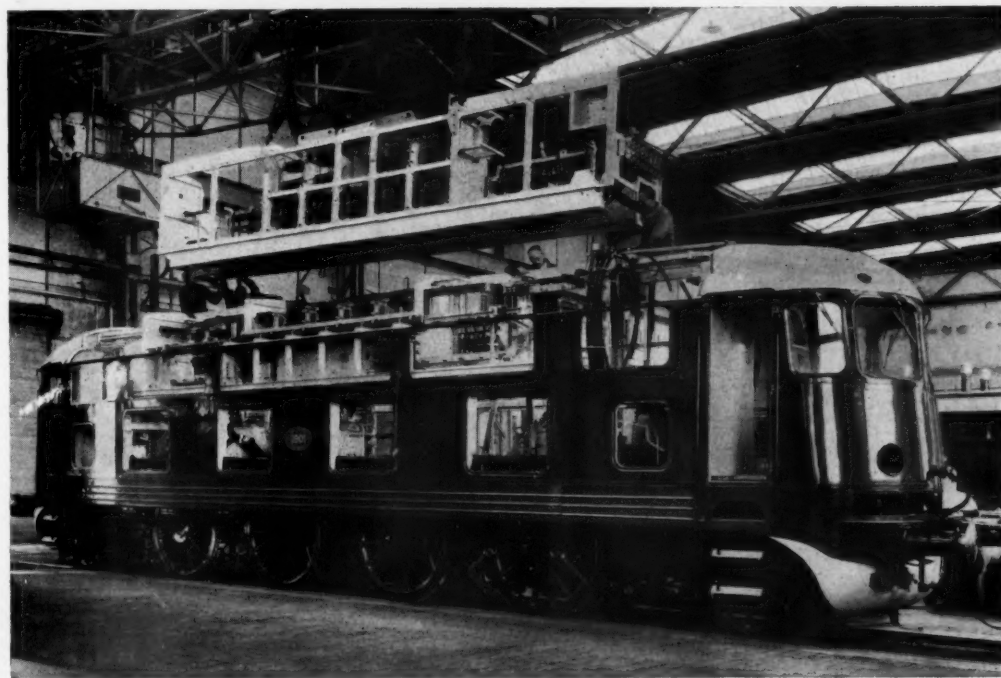
to have been completed by the autumn of 1947, still proceeds at an extremely slow pace, because of shortage of materials.

ANOTHER PROTOTYPE 50-CYCLE LOCOMOTIVE FOR FRANCE.—In addition to the Co-Co 50-cycle locomotive being built in Switzerland for the French National Railways (see our May 21 issue), an order for another machine to operate on this type of power supply has been placed with the French companies of Schneider et Cie, and Matériel Electrique Schneider-Westinghouse. This will have three 4-wheel power bogies with individual axle drive (Bo-Bo-Bo) and will operate on 20 kV. at the 50-cycle frequency. The drawbar horsepower will be 3,000, and the electrical equipment is to be designed so that the machine will work with equal efficiency on the high-voltage a.c. supply or at 1,500 V. d.c. The weight will not exceed 112 tons 6 cwt.

Mixed-Traffic Electric Locomotive for Holland



Driving and carrying wheels ready for mounting of body, showing how the front and rear driving axles are carried in the bogie frames



One of the apparatus racks, fully assembled and wired, being installed through the roof of the locomotive

High Mileage between Repairs in Kenya

Recent performance of a 2-8-2 locomotive built in Great Britain 20 years ago

By Gordon Gibson,

Chief Mechanical Engineer, East African Railways & Harbours



DURING the second world war, the Kenya & Uganda Railways (now merged in the East African Railways & Harbours Administration), were called upon, like other railways, to handle a much increased volume of traffic, which placed a great strain on locomotive and wagon capacity. At the same time a large proportion of the workshop repair capacity had to be turned over to the construction, maintenance, and repair of military equipment.

The end of the war brought no diminution in traffic demands, and by the time the workshops were free of military commitments, the railways were faced with the whole of their stock suffering seriously from the effects of deferred maintenance. To add to the difficulties, stocks of spares and material for manufacture were virtually unobtainable.

Intervals between Shopping

Before the war, locomotives were shopped at approximately 60,000 miles, but early in 1946 deferred maintenance had reached a point where engine-mileages were over 140,000 between shop repairs. By March, 1948, this figure had been reduced to 102,000 miles. Whilst deferred maintenance is being dealt with, the target figure between shopping is 80,000 miles, and when this is achieved, further adjust-

ments, according to wheel sizes and classes, will bring maintenance back to its pre-war level.



K. U. R. & H. 2-8-2 locomotive No. 1

In spite of the somewhat unsatisfactory maintenance position, some interesting engine-mileage figures appear in the returns for March, 1948. Seven of the heavier engines with 4-ft. 3-in. and 4-ft. 6-in. driving wheels, which operate goods and passenger trains over the Mombasa-Nairobi section, a distance of 330 miles, averaged 7,668 miles each. This section has a ruling gradient of 1.5 per cent. in the upward direction and 1.18 per cent. in the down, and a maximum speed limit of 40 m.p.h. The journey between Mombasa and Nairobi involves a climb from sea level to an altitude of 5,500 ft.

Locomotive Dimensions and History

Locomotive No. 1, which is illustrated, was one of the seven referred to above. This is a 2-8-2 type, built by Robert Stephenson & Company, with a 17½-ton axle load, 4-ft. 3-in. driving wheels, cylinders 21½ in. dia. by 28 in. stroke, and a tractive effort of 37,938 lb. at 85 per cent. boiler pressure. It was put in service in 1928, and in 20 years it has covered over one million miles.

In spite of the fact that it had completed 174,500 miles since last shopping, with only one failure recorded against it, this particular engine celebrated its 20th birthday by running 8,225 miles during March, 1948. Assuming traffic remains at the same level, the mileage since last shopping will be approximately 200,000 by July.

Dock Gate Repairs at Plymouth Millbay

Arrangements for rendering the gates buoyant so that they could be floated ashore for repair

THE reconditioning was completed recently of the gates of the Plymouth Millbay Graving Dock, the work involving a series of somewhat unusual operations. The gates, spanning an 80-ft. entrance, had been in use since their construction in 1916. Deterioration of the heel and mitre posts and cills had become so serious that the pumps had to be kept running continuously when the graving dock was in use.

The leaves, weighing 110 tons each, are of wrought iron, with single skins, except for buoyancy chambers in the lower

halves; they were constructed *in situ* behind a dam, and were not designed for flotation. Repair of the gates *in situ*, involving the construction of a coffer dam, proved impracticable.

No lifting appliances capable of removing the gates bodily were available, so it was decided to add a temporary steel skin to make the gates buoyant, so as to float them off into the Inner Basin and bring them ashore, no dry dock or slipway being available.

A temporary slipway, 200 ft. long, had to be constructed in the Outer Basin under

tidal conditions. The gates were landed on this slipway and drawn up to quay level by hand winches. On reaching the head of the slipway, the gates had to be traversed a distance of 320 ft., the route involving two right-angle turns, to reach the only site which could be placed at the Engineer's disposal for the six months required for carrying out repairs.

On completion of the work, which included the addition of a permanent second skin to make the gates completely buoyant, they were launched direct into the Inner Basin and re-stepped in the usual manner under their own flotation. Mr. N. S. Cox, B.Sc., M.I.C.E., Divisional Engineer, Plymouth, was responsible for the work, under the general direction of the Chief Engineer.

Dock Gate Repairs at Plymouth Millbay

(See article on opposite page)



Aerial view of site with south gate jacked up and north gate on slipway

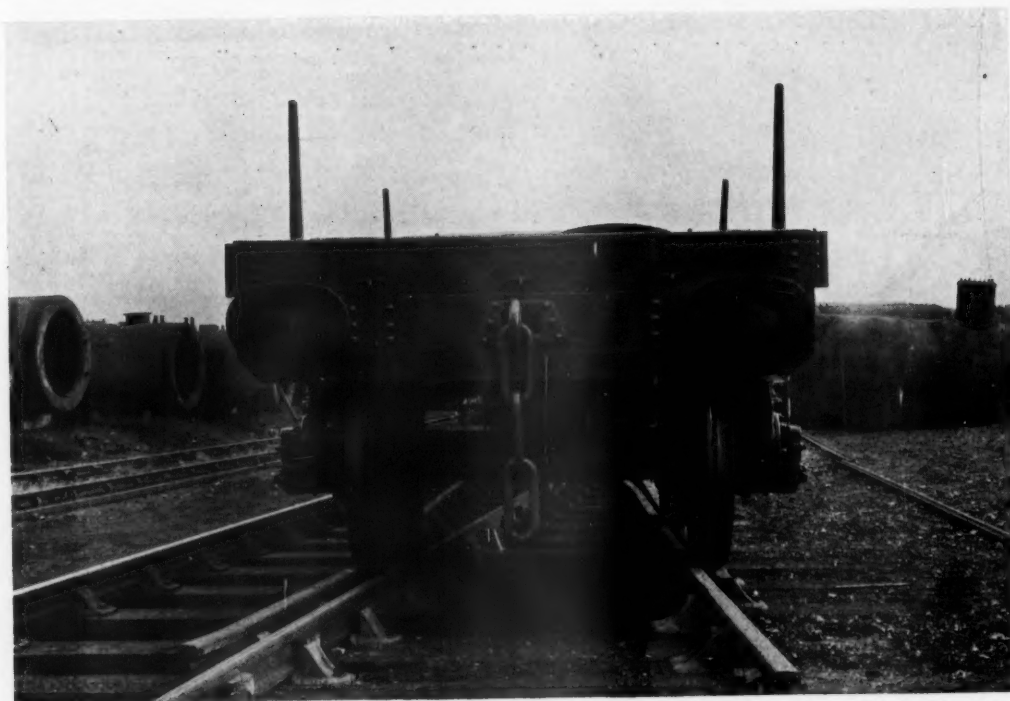


The north leaf being launched

Another Unbroken Main-Line Crossing



Trial of "E(R)" type catch points at Swindon, Western Region



Detail of trial of "E(R)" type catch points at Swindon, showing wheel passing over running rail without touching it, as the wing rail is ramped up to $1\frac{1}{2}$ in. above the running rail (see also article in our May 7 issue and letter from Mr. E. C. Cookson in our May 14 issue)

RAILWAY NEWS SECTION

PERSONAL

Mr. Edwin A. Bromley, hitherto General Purchasing Agent, has been appointed Vice-President in Charge of Purchases & Stores, Canadian National Railways, succeeding Mr. D. McK. Ford, who has retired.

Mr. John Lucas Willoughby, O.B.E., M.Inst.T., who retired recently from the position of Deputy General Manager, Sudan Railways, and has now been appointed Assistant Secretary to the Road Transport Executive of the British Transport Commission, was educated at Ovingdean Hall, Brighton, and at Westminster

Sudan Railways, in 1944, and Deputy General Manager in 1946. In 1934 Mr. Willoughby became a member of Gray's Inn, by which he was later called to the Bar.

Mr. T. S. Pick, Substation Engineer, London Transport Executive, has been appointed Electrical Engineer, and will be responsible to the Chief Engineer for the whole of the electrical generation and distribution systems of the Executive.

Mr. E. H. Wilson, B.A., B.Sc., A.M.I.C.E., Chief Technical Manager, South African Railways, who has retired, was born at Port Elizabeth and received

Bulleid (Chief Mechanical Engineer, Southern Region, British Railways), Mr. L. C. Glenister (lately Chief Accountant L.N.E.R.), Mr. W. J. Elliott (Director, and lately General Manager, Hay's Wharf Cartage Co., Ltd.), and Mr. A. W. Tait (Assistant to the Chief Accountant, Western Region, British Railways), who will act as Secretary (see editorial note, page 174).

Mr. G. J. A. Lindenberg, B.A., B.Sc. (Eng.), M.I.Mech.E., A.M.I.Loco.E., Chief Stores Superintendent, South African Railways, who has been appointed Chief Technical Manager, graduated as B.A. at Rhodes University, and at the Witwatersrand University obtained the degree of



Mr. J. L. Willoughby

Deputy General Manager, Sudan Railways, 1946-48; now Assistant Secretary, Road Transport Executive



Mr. E. H. Wilson

Chief Technical Manager, South African Railways, 1945-48



Mr. G. J. A. Lindenberg

Appointed Chief Technical Manager, South African Railways

School, where he was a Classical King's Scholar. He entered L.N.W.R. service as a probationer in April, 1918, and obtained experience in all sections of the Traffic and Goods Departments. In 1923 he took up an appointment in the Traffic Department of the Buenos Ayres Great Southern Railway, serving in various capacities until appointed Assistant Chief of Control & Movement for the Southern Division in April, 1927. In May, 1928, he entered the service of the Sudan Railways as District Traffic Manager, serving in that capacity and as Assistant Operations Superintendent until appointed Assistant Port Manager, Port Sudan, in 1935. In August, 1937, he became Acting Port Manager, and in August, 1938, Port Manager. Mr. Willoughby was responsible for the introduction in 1930 of a system of train control, on the section between Haiya and Port Sudan, which led to its subsequent extension from Sennar to Khartoum and from Khartoum to Port Sudan. In addition to his duties as Port Manager, he undertook between 1941 and 1944 the representation in the Sudan of the Ministry of War Transport. He was also Chairman of the local War Transport Committee from the institution of that body in July, 1941. In recognition of his war services, Mr. Willoughby was mentioned in dispatches in 1941 and was made an O.B.E. in the King's Birthday Honours, 1944. He was appointed Traffic Manager,

his early education at Muir College, Uitenhage, and at Rhodes University College, Grahamstown. At Rhodes he won the Hiddingh Scholarship to continue his studies overseas. He graduated in Engineering at Glasgow University and served engineering articles with Sir Robert Elliott Cooper, of Westminster. In January, 1914, Mr. Wilson joined the South African Railways, and in 1915 proceeded overseas again to volunteer for active service with the R.A.F., in which he served in a technical capacity until the end of the war. On his return to South Africa in 1919 he resumed his service with the South African Railways. Some of the more important posts held by Mr. Wilson since that date have been those of Chief Draughtsman; System Engineer; Inspecting Engineer; Assistant Chief Civil Engineer; Chairman of the Economic Bureau and of the Railway Tender Board; and, finally, Chief Technical Manager, since 1945.

EIRE TRANSPORT INQUIRY

It has been announced that Sir James Milne (lately General Manager, Great Western Railway) who, as recorded in our July 9 issue, is to undertake an inquiry into the transport position in Eire, will be assisted by Mr. T. W. Royle (Deputy Chief Regional Officer, London Midland Region, British Railways), Mr. A. S. Quartermaine (Chief Engineer, Western Region, British Railways), Mr. O. V.

B.Sc. (Eng.). He has held the positions of Airways Manager; Mechanical Engineer; Chief Superintendent (Motive Power); Assistant Chief Mechanical Engineer; and Chief Stores Superintendent. During the time he was Assistant Chief Mechanical Engineer, Mr. Lindenberg was released for active service. In the Army, with the rank of Lt.-Colonel, he was Assistant Director (Mechanical) on the staff of the Deputy Director of Supplies & Transport. He is a member of the Conciliation Board and of the Superannuation Fund Committee, and has served on the Accidents Investigation, Staff Training and Sick Fund Committees.

We regret to record the death, at the age of 61, of Mr. William Casey, President of the Canadian Locomotive Co. Ltd.

Mr. Arthur Dyson has retired from the position of Joint Managing Director of Horseley Bridge & Thomas Piggott Limited, which position he has held since 1928. He will continue to act in a consultative capacity and retain his seat on the board. Mr. J. W. Baillie will continue as sole Managing Director of the company.

Mr. A. S. Kirby, A.M.Inst.T., Divisional Controller (Passenger Services), Office of Divisional Operating Manager, Crewe, London Midland Region, British Railways, who, as recorded in our June



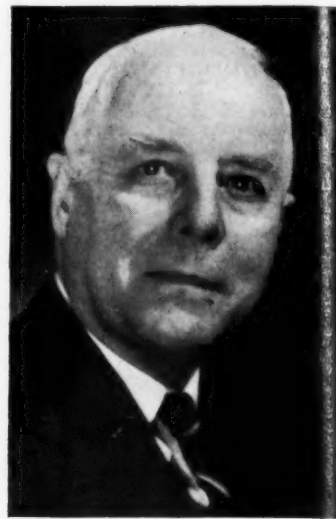
Mr. A. S. Kirby

Appointed Chief of Divisional Trains Office, Crewe, London Midland Region, British Railways



Mr. G. W. Stewart

Appointed District Superintendent, Manchester, Eastern Region, British Railways



The late Mr. Roy V. Wright

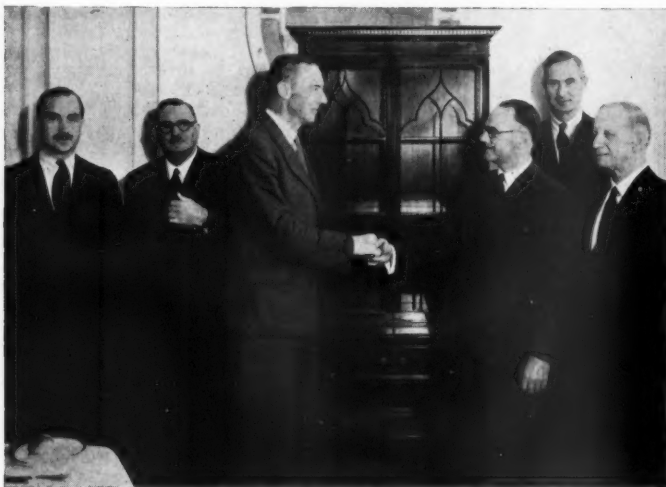
Managing Editor of the *Railway Age* (and formerly *Railway Age Gazette*), 1912-48

11 issue, has been appointed Chief of Divisional Trains Office, Office of Divisional Operating Manager, Crewe, was educated at Haberdashers' Aske's School, and afterwards graduated at London University. In 1918 he entered the service of the L.N.W.R. in the Superintendent of the Line's Office, Euston. Between 1920 and 1928 he received training in the working of passenger stations, traffic yards and district operating and commercial offices; and then for a year was engaged in connection with the development of the road passenger organisation of the L.M.S.R. In 1930-31 he represented the company in Germany, in an exchange of officers between the L.M.S.R. and the German State Railway, to study and report on railway conditions generally. He was appointed Assistant District Controller, Rugby, in 1931, and to the corresponding post at

Willesden in 1933. In 1939 he was a lecturer on operating subjects at the L.M.S.R. School of Transport, Derby, until the outbreak of war, when he became Assistant District Controller, Chester (located at Birkenhead). From 1940 to 1942 Mr. Kirby was District Controller, Chester, and thereafter was Assistant Chief of Divisional Trains Office, Crewe, until October, 1944, when he was appointed Divisional Controller (Passenger Services), Crewe.

Mr. G. W. Stewart, A.M.Inst.T., District Superintendent, Lincoln, Eastern Region, British Railways, who, as recorded in our August 6 issue, has been appointed District Superintendent, Manchester, was educated at George Heriots School, Edinburgh, and joined the North British Railway at Edinburgh in 1922. In 1929, as a result of

competitive examination, he was made a traffic apprentice; and on completion of his training was given charge of the Road Transport Section of the Passenger Manager's Office, Edinburgh, L.N.E.R.; in that position he was responsible for the co-ordination of road and rail services with the railway-associated bus companies in Scotland. In 1939 Mr. Stewart was appointed to the Staff Section, Superintendent's Department, Edinburgh, and subsequently held the positions of Chief Staff Clerk to the Superintendent, Passenger Manager and Locomotive Running Superintendent; and Staff Assistant to the Divisional General Manager, Edinburgh. He was transferred to the Southern Area in 1942 as Staff & General Assistant to the Superintendent, that appointment embracing the staff in the Locomotive Running Departments of the area. In 1946 he became District Superintendent, Lincoln.



Mr. C. P. Hopkins, Chief Regional Officer, shaking hands with Mr. C. M. Stedman, retiring Locomotive Running Superintendent, North Eastern Region, in front of the book-case of which he recently made a formal presentation to Mr. Stedman (see accompanying paragraph). Left to right: Messrs. S. A. Finnis, A. H. Peppercorn, C. M. Stedman, C. P. Hopkins, Miles Beevor and C. M. Jenkin Jones

PRESENTATION TO MR. C. M. STEDMAN
At a recent luncheon at York, attended by 55 officers of the North Eastern, Scottish, and Eastern Regions of British Railways, and by Mr. Miles Beevor, Chief Secretary & Legal Adviser to the British Transport Commission, Mr. C. P. Hopkins, Chief Regional Officer, North Eastern Region, made the formal presentation of a period book-case to Mr. C. M. Stedman on his retirement from the position of Locomotive Running Superintendent of that region. Tributes were paid to Mr. Stedman in the course of speeches by Mr. Hopkins and Mr. Beevor, and by Mr. C. M. Jenkin Jones, who retired on December 31, 1947, and was the last Divisional General Manager, North Eastern Area, L.N.E.R. The North Eastern Region officers present included also Mr. S. A. Finnis, Assistant Chief Regional Officer, and Mr. A. H. Peppercorn, Chief Mechanical Engineer of the Eastern and North Eastern Regions.

Mr. Roy V. Wright, whose death, in his 72nd year, we recorded briefly last week, was Vice-President & Secretary of the Simmons-Boardman Publishing Corporation, and Managing Editor and Editor, respectively, of our American contemporaries, the *Railway Age*, and the *Railway Mechanical Engineer*. He was born at Red

Wing, Minnesota, and in 1898 graduated as a mechanical engineer at the University of Minnesota. In that year he became a machinist apprentice in the South Minneapolis locomotive erecting shops of the then Chicago, Milwaukee & St. Paul Railroad, and he served also with the Chicago Great Western Railway before joining the Pittsburgh & Lake Erie Railroad as a mechanical engineer in 1901. In 1904 Mr. Wright left railway service to enter journalism, with which his first connection was as Associate Editor of the *American Engineer & Railroad Journal*. In 1905 he became Editor of that publication, continuing in that capacity until 1910, when he resigned to become Mechanical Department Editor of the *Railway Age Gazette* (now *Railway Age*). When the Simmons-Boardman Publishing Company, publisher of the *Railway Age Gazette*, purchased the *American Engineer & Railroad Journal*, Mr. Wright, in January, 1912, again became Editor of that paper, now the *Railway Mechanical Engineer*. In October of the same year he was appointed also Managing Editor of the *Railway Age Gazette*, in which position he continued when that publication became the *Railway Age*. In 1912, also, he became Editor of the "Locomotive Cyclopaedia" and the "Car Builders' Cyclopaedia," which positions he likewise held until the time of his death. Mr. Wright had been for long associated with the activities of the American Society of Mechanical Engineers, which elected him an Honorary Member and Fellow. He was a member of the Franklin Institute and of the Newcomen Society and of many other bodies. In 1931 the Stevens Institute of Technology awarded him the honorary degree of Doctor of Engineering.

Mr. H. W. Few, Trains Assistant to the Operating Superintendent, Eastern Region, British Railways, has been appointed District Superintendent, Stratford, Eastern Region.

We regret to record the death on August 6 of Mr. W. M. Ratcliffe, J.P., M.I.Mech.E., Joint Managing Director of Heenan & Froude Limited, at the age of 62.

Mr. H. T. Duffield has been appointed Chairman of the National Savings Advisory Committee of the Road Transport Industry, in succession to Mr. E. S. Shrapnell-Smith, who, as already recorded, has retired from the Chairmanship after seven years in that office.

INDIAN RAILWAY STAFF CHANGES

Mr. K. Durai, lately General Manager, Jodhpur Railway, is appointed to officiate as General Manager, South Indian Railway, in place of Sir Jeffery Reynolds, who proceeded on leave, preparatory to retirement, during July last.

On transfer from the Great Indian Peninsula Railway, Mr. S. N. Saksena is appointed to officiate as Locomotive & Carriage Superintendent, Oudh Tirhut Railway.

Mr. W. G. W. Reid, General Manager, Madras & Southern Mahratta Railway, has proceeded on leave preparatory to retirement.

Mr. P. Morris, an officer of the Mechanical Department, Madras & Southern Mahratta Railway, has been appointed Director, Mechanical Engineering, Ministry of Railways (Railway Board), vice Mr. W. Oldfield, who has proceeded on long leave.

Mr. E. W. Ross Gwynne, Deputy Director, Telecommunications, Ministry of

Railways (Railway Board), has proceeded on leave preparatory to retirement.

Mr. A. D. Dhall, Divisional Superintendent, Eastern Punjab Railway, has been appointed Chief Engineer, Oudh Tirhut Railway.

ROAD TRANSPORT EXECUTIVE

The Road Transport Executive, with the approval of the British Transport Commission, has made the following appointments, in addition to those already announced:—

Engineering Department

Deputy Chief Engineer (Freight):

Assistant: Mr. A. H. Passey.

Architect-Surveyor (Acting): Mr. W. C. Leslie-Carter.

Chief Officer in charge of Valuations (Vehicles & Plant): Mr. S. R. Geary.

Assistant: Mr. A. Strickland.

Finance Department

Chief Financial Officer: Mr. F. J. Orchin.

Chief Accountant (Freight): Mr. N. R. Bellwood.

Assistants: Mr. B. F. Pocock and Mr. C. W. Baker.

Freight Department

General Haulage & Commercial: Assistant: Mr. A. F. Walton.

Organisation & Development Department
Acquisitions & Permits: Mr. E. F. Horobin.

Co-ordination of Inland Transport: Mr. J. C. Chambers.

Rates & Charges: Mr. S. R. Vigor (on loan from British Transport Commission).

Secretarial & Legal Department

Assistant Secretary: Mr. J. L. Wilmoughby.

Headquarters Administration: Mr. N. W. Selby.

Staff & Welfare Department

Welfare, Training & Education: Mr. I. K. Macalaster.

Establishment: Mr. G. M. Deas.

Divisional Managers (Freight)

South Eastern: Mr. F. C. G. Mills.

South Western: Mr. A. J. Wright.

Mr. Cyril Watts, Commercial General Manager of Richard Thomas & Baldwins Limited, is retiring from that position on September 30, and will be succeeded by Mr. H. F. Spencer. Mr. Watts will continue as a Director.

"OLD PERNAMBUCANOS"

A re-union dinner of past and present members of the Great Western of Brazil Railway was held at the Charing Cross Hotel recently. Mr. G. S. Tomkinson proposed the toast of the "Great Western of Brazil Railway," and Mr. R. H. Dobson, the present General Manager, responded. Mr. Tomkinson recounted some of his experiences as a young engineer on construction and extensions of the line before 1914, and spoke of the many difficulties which had had to be overcome under adverse climatic conditions. Mr. Dobson mentioned the great growth of traffic, and the progress of the new extensions which it was hoped would be inaugurated for traffic in 1949, after which it would be possible to travel by train from Rio to Recife. He also referred to the fact that those new lines would be laid with rails manufactured at the new Brazilian steelworks of the Volta Redonda Company. The toast of "The London Administration" was proposed by Mr. Frank Fellows, and Mr. Frank Ellis, Secretary of the company, replied. It was resolved to make the dinner an annual function,

and it was suggested that all old members of the railway not then present, who would like to be included, should communicate with the Secretary. Others present at the dinner were:—

Messrs. W. S. Batham, A. L. Bradford, J. B. Callander, Leslie Clemenson, A. G. Cooper, Conrad Davies, J. Newman Ellis, F. B. Fellows, Ernest Graham, J. Logan Griffiths, George Ingram, H. D. Jones, A. C. MacDougall, C. R. Myles, B. Pease, and L. G. Walters.

Mr. Alfred Baynton (lately General Manager, East Kent Road Car Co. Ltd.) has accepted the Presidency of the Omnibus Society for 1948-49. He succeeds Mr. Charles E. Lee.

Mr. W. Heckroodt, Deputy General Manager, South African Railways, and Mrs. Heckroodt, who are on a visit to this country, gave a cocktail party at South Africa House, London, W.C.2, on August 4. Among those who attended were members of the Railway Executive of the British Transport Commission, directors of railway engineering and equipment manufacturing companies, and others with interests in, or associations with, the South African Railways.

New and Proposed Lines in Norway

(Concluded from page 184)

certain sections of the Sörland and Kongs-vinger lines.

An important aspect of railway construction in Norway is the prevention of frost damage to the permanent way. On new lines the ballast is often laid out on an insulating layer of peat-bog.

The building programme of the Norwegian State Railways also includes the construction of a Central Station at Oslo, with a tunnel connection between the eastern and western railway systems and a new headquarters building. Other projects concern the extension of the double-tracking from Asker to Drammen and the construction of a short-cut tunnel near Asker. There are also plans for a direct railway from Oslo to Hønefoss which would shorten the Oslo-Bergen route by 27 miles and would, at the same time, create better conditions for the development of certain Oslo suburbs. Other improvements are planned at the Bergen end, where two tunnels of 4½ and 1½ miles will shorten the line by 14 miles.

Over and above these immediate plans, there are a number of remoter projects, some of them sponsored by non-official bodies. A glance at the Norwegian railway map reveals obvious gaps in the railway system. In particular, the sectors between the Oslo-Stavanger, Oslo-Bergen, and Oslo-Dombas lines are almost devoid of railways. To fill these gaps, influential organisations urge construction of new lines, such as a direct Stavanger-Oslo line and Haugesund-Notodden-Oslo, and Bergen-Dombas lines. Other projects have been worked out for improved connections with the Swedish railway system.

One of the favourite objects of railway planners, expert or otherwise, is the extension of the Nordland Railway around the northernmost tip of Norway to Kirkenes. Work on such a line was, in fact, started by the Germans at Hitler's express order. The plans are now being revised by the Norwegian State Railways. However, the length of the line (570 miles from Narvik to Kirkenes), the difficult topographical and climatic conditions, and the rather poor traffic expectations relegate this project to a more remote future.

The York Royal Show

Details of the arrangements which have been made to handle rail traffic at this year's show

EVEN before the Royal Show at Lincoln last year, it was known that the 1948 Show would be held at York, and from May, 1947, the Lincoln arrangements were observed for guidance in handling the rail traffic for the succeeding year.

By August, 1947, the matter was dealt with on a formal and official basis and a Royal Show Committee came into being. The District Passenger Manager, York, was requested to take the initiative and the Committee was organised from the District Traffic Officers and the District Engineer. From the parent committee, a sub-committee of the Assistants was formed, and their remit was to carry out the detailed planning of arrangements.

Certain considerations, among them the centrally situated position of York, and limitations on the petrol supply, suggested it would not be unsafe to make arrangements on the basis of double the traffic handled at Lincoln, and this suggestion governed the decisions of each committee and sub-committee.

Traffic started to arrive in October, 1947, and consisted of timber for stands, permanent showground offices and other buildings. Soon it was realised that sleeper tracks would be needed and 18,000 sleepers were carted to the showground on the Knavesmire before the Show and back again when it was over.

The offices on Holgate dock were goods, passenger, operating, staff and local intelligence. From June 7 all Royal Show goods clerical work was dealt with at the temporary office and from the same date the staff office started to function. The passenger office opened on June 28 and handled all clerical work in connection with Show livestock traffic. The intelligence office operated from the same date. The District Superintendent's normal resources proved adequate to requirements until July 1 from which date the temporary operating-office was opened.

The showground offices comprised a main public office, which served as a goods and livestock booking office; as pressure



British Railways' stand at the York Royal Show

Goods smalls traffic was handled at Leeman Road goods yard and shed throughout the Show period. Before June 7 and after July 19, full wagon loads also were dealt with there, but Holgate dock was the principal site for handling the traffic, both of freight and livestock between June 7 and July 19, where it was possible to deal with two trains simultaneously.

Parcels traffic was dealt with at York Station parcels office. Full wagon loads were handled at the Queen Street dock and livestock by ordinary passenger-train was unloaded at the old station where there is accommodation for 21 vehicles. Implements specials were worked direct to Holgate dock, and those arriving by service trains were worked through York yard in the ordinary way.

The question of accommodation for the extra staff became a subject for consideration at a very early date and it was decided to open temporary offices in railway coaches at the Holgate dock platforms, as well as sleeping quarters. Ablution and lavatory accommodation was erected in temporary premises and arrangements for staff meals were made so that they could be served at the railway canteen at Holgate Road carriage works, or, if necessary, at the one on Leeman Road.

fluctuated on one or the other, it was controlled by movable notices governing the counter space. At one side of the main office was a small passenger inquiry office, which, during the Show, dealt with 4,000 inquiries. Separate accommodation was provided for Show representatives and railway inspectors and a small lounge for railway officers and their guests.

ROYAL VISIT

The highlight of the Show was the visit of the King and Queen, accompanied by Princess Margaret. The Royal party arrived by train at York Station after spending the night in the Royal train on a secluded portion of the Malton-Driffield branch. They were welcomed at York Station by the Lord Mayor and the Sheriff (the former a retired railwayman and the latter an active one), the Recorder and other civic dignitaries. North Eastern Region Officers presented to Their Majesties were Mr. C. P. Hopkins, Chief Regional Officer, Mr. Paul Gibb, Goods Manager, Mr. J. E. M. Roberts, Passenger Manager, and Mr. E. M. Rutter, Superintendent.

The operating and cartage arrangements worked particularly well and there were only a few very minor hitches; the pre-planners proved to have covered almost

every aspect of an extensive and complicated operation; the scale of which is indicated by the following figures:—

Livestock—			
Inward	253 wagons	589 head	
Outward	254 "	593 "	
Special Stock Trains—			
Inward	12	138 wagons	
Outward	12	190 "	

The outward specials were despatched in the ten hours between 6.15 p.m., July 9, and 4.15 a.m., July 10, and, with only one exception of 5 min. late start, all left to time, some even 20, 25, or 60 min. early.

Implements were as follows:—

Exhibits, etc., inward	809 wagons
Stand equipment, etc., inward	658 "
O.C.S. cartage vehicles, etc., inward	157 "
Total wagons, inward	1,624
Total tonnage, approx.	4,100
Total wagons, outward, 667 plus 116 O.C.S. traffic.	

Maximum wagons loaded a day—

Inward	100 (June 24)
Outward	126 (July 12)
Containers	170

The maximum number of tractive units in use for cartage was nine, as well as another two for internal use on showground, and the maximum number of haulage units in use was 48 cattle floats and 36 trailer flats. After the Show the ground was cleared in six days.

Starting with 30 on June 7, the staff engaged worked up to the maximum numbers of 155 on July 3 (2 shifts) and 197 on July 9 (2 shifts); these were the peak inward and outward livestock periods.

Some 32,000 passengers over the normal seasonal traffic were conveyed by rail, using the ordinary services and 21 additional trains. The total attendance figure for paying visitors, passing through the turnstiles between July 6 and 9 was 237,803 and though it had been hoped the record attendance set up at Lincoln would be exceeded at the York Show, inclement weather on the last two days reduced the number very considerably; even so, it was only about 2,000 less than at Lincoln.

BRITISH STANDARD FOR ENDLESS V-BELT DRIVES.—The British Standards Institution has recently published B.S. 1440:1948, Endless V-Belt Drives. It deals with endless V-belts having an included angle of 40 deg. and consisting of rubber and textile materials; and with V-groove pulleys, used primarily for power transmission for industrial purposes. It does not cover automotive V-belt drives and variable speed drives employing pulleys with movable flanges. Copies are obtainable from the Sales Department, British Standards Institution, 24, Victoria Street, S.W.1, price 3s. each, post free.

ECONOMIC CO-OPERATION ADMINISTRATION AND CHINESE FINANCING NEGOTIATIONS.—It is reported from Washington that the Economic Co-operation Administration is shortly to enter into financing negotiations with the Chinese Government for 60 million dollars' worth of power development and other reconstruction projects sought by China in its 180 million dollar assistance request. A draft report, which will form the basis for the final E.C.A. decision on the projects scheduled to be covered by the negotiations, will be submitted to the E.C.A. Administrator by the E.C.A. Survey Director of China Aid Reconstruction Programme. The E.C.A. is expected to consider a plan whereby the Shanghai Power Company, whose common stock is largely held by American interests, will become the wholesaler for a network of smaller power companies. The Canton-Hankow Railway has applied for an E.C.A. loan of 22 million dollars.

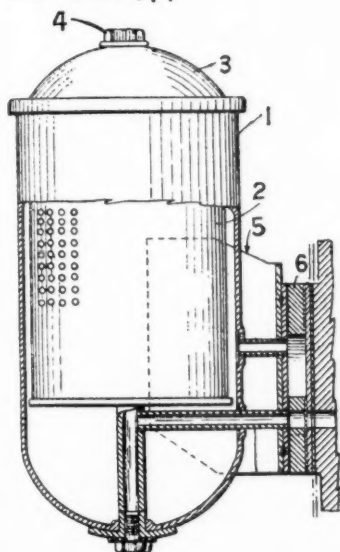
ABSTRACTS OF RECENT PATENTS*

No. 576,198. Oil Filter

J. W. Wilkinson, of 133, Wilson Avenue, East Providence, U.S.A. (Application date: April 25, 1944).

A light construction of engine-mounted oil filter is made with a pressed steel body 1, inside which is a filter cartridge 2, and which is closed by a cover 3, secured by

'R.G.' 576,198/44

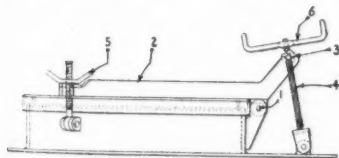


a screw 4. Inlet and outlet pipes communicate with oil ducts in the engine casting. The filter is carried by a sheet-metal bracket 5, spot welded to it and having a metal pad 6, brazed to the mounting face. This arrangement enables the cartridge to be replaced without breaking any joints in the oil supply line.

No. 578,247. Fluid-Tight Covers

Swan, Hunter & Wigham Richardson Limited, of Neptune Works, Walker, Newcastle-upon-Tyne, and T. Guthrie, of 23, Shaftesbury Avenue, Whitley Bay. (Application date: August 14, 1944).

An oil- or water-tight cover as used for tank wagons is pivoted at 1 and held closed by a frame 2, which may be triangular in shape. Adjacent to the pivot the frame is extended to engage a nut 3 on a threaded rod 4. Normal screw toggles 5 are pro-



R.G. 578,247/44

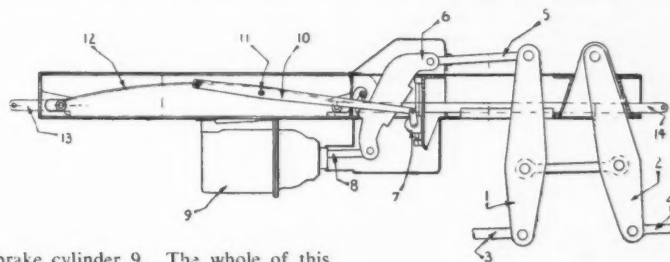
vided at the other corners of the frame. When the cover is to be opened, the toggles 5 are taken off and detachable handle 6 is used to run the nut 3 down the rod 4, thereby lifting the cover about its pivot. The invention reduces the number of

fastenings necessary, avoids accidental dropping of the cover during opening and if the handle 6 is removed, prevents unauthorised opening.

No. 578,174. Wagon Brakes

Svenska Aktiebolaget Bromsregulator, of Malmo, Sweden. (Convention date: June 21, 1943).

The invention provides braking pressure dependent on the loading of a wagon. Equalising levers, 1, 2 connected by rods 3, 4 to the brake shoes, are operated by a rod 5 connected to a lever 6, having a movable fulcrum 7, and whose other end is operated by the rod 8 projecting from



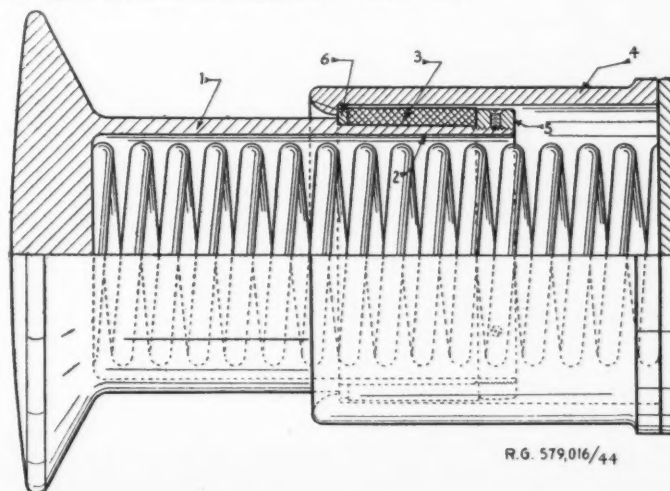
R.G. 578,174/44

the brake cylinder 9. The whole of this mechanism is mounted on a beam extending longitudinally in the wagon frame and the fulcrum is moved by a lever 10 pivoted at 11, and operated by a semi-elliptic spring 12. The two ends of this spring are connected through links 13, 14 to linkages on the spring shackles of the wagon wheels so that as the springs are increasingly deflected, the fulcrum 7 is moved to provide increased leverage for the brake rod 8, and thus increased braking pressure.

No. 579,016. Spring Buffers

Ibbotson Brothers & Co. Ltd. and S. Hartley, both of Globe Steel Works, Sheffield, 3. (Application date: June 17, 1944).

In order to prevent jamming of a buffer plunger as a result of corrosion or friction, a bearing surface of synthetic resin is provided. The inner end of the plunger 1 is of reduced diameter at 2, and this is surrounded by a tubular sleeve 3 of laminated cotton fabric, bonded by a hardened synthetic resin which forms a bearing surface for the inner face of the casing 4. The sleeve is retained by a ring nut 5, and its outer edge is protected by a metal stop



R.G. 579,016/44

ring 6 of slightly less diameter than the sleeve.

No. 576,017. Overhead Wire Fittings

British Insulated Cables, Limited, of Prescott, Lancs., London Passenger Transport Board, of 55, Broadway, London, S.W.1, J. Holland, of "Westwyn," Latchford, Warrington, and T. C. Brown, of "Brentwood," St. Mary's Road, Huyton. (Application date: October 7, 1944).

In order to overcome the difficulty of mounting a wire fitting in a horizontal position when carried on an inclined part of the supporting span wire, the fitting is made in two parts, one being clamped to the other so that the eyes to which the two sections of the span wire are connected may be adjusted vertically relative to each

other. With the eyes displaced in this way, the fitting takes up a position inclined to the run of the wire, and is adjusted until it is horizontal.

Complete Specifications Accepted

575,522. Sinclair, H. Torque limiting device.

575,907. Hunt, F. O. Treating fuel supply of diesel engines.

579,896. Westinghouse Brake & Signal Co. Ltd. Railway traffic control.

579,919. Eaton, A. H. Fuel injector pump control.

579,957. A.G. Brown, Boveri & Cie. Electric switch contacts.

580,111. Westinghouse Brake & Signal Co. Ltd. Fluid pressure braking.

580,136. Dowty Equipment Limited, Bingham, A. E. and Morris, R. P. W. Packing glands.

580,286. The Hoffmann Mfg. Co. Ltd., Smith, C. H. and Longman, E. G. Ball bearing cage.

* These abridgments of recently published specifications are specially compiled for *The Railway Gazette*, by permission of the Controller of His Majesty's Stationery Office. Full specifications can be obtained from the Patent Office, 25, Southampton Buildings, London, W.C.2, price 1s. each.

Parliamentary Notes

London Bus Services

Mrs. Mabel Ridealgh (Ilford North—Lab.) on the motion for the adjournment of the House of Commons for the summer recess on July 30 raised the problem of the supply of buses in the Greater London area. She said that in June, 1938, the total number of buses, coaches, trolleybuses, and trams in the London area had been 9,080. In June, 1948, the number was 9,875. However, the vehicles actually in service on those approximate and respective dates were 7,973 and 8,104, an increase of only 2.63 per cent. Yet the Chairman of the London Transport Executive told them that on account of the shifting of the population from the centre of London to the outskirts there had been an increase of at least 12 per cent. in the number of passengers using one or other forms of London transport. Taking the actual distances into consideration, the travelling was increased by at least 30 per cent. Of the 5,840 buses and coaches in service today, 3,500 were over 12 years of age and 1,800 over 16 years. Between 1940 and 1947, 3,800 would normally have been replaced; in fact, 320 had been replaced. The number of buses unable to leave the garages each day owing to not being in running order was something like 300, mainly due to lack of spares.

Sir Wavell Wakefield (St. Marylebone—C.) suggested that if the Minister took a careful look at the British all-steel mineral wagon, at present being produced in large numbers from the mild steel of this country, he would see that if it was redesigned, and high-tensile low-alloy steel was used, there could be a saving of approximately 1 to 1½ tons per truck. The steel saved could be re-allocated for bus production.

Mr. Alfred Barnes (Minister of Transport), in the course of his reply, made it plain that the issue raised was general throughout the country. Dealing with the London problem, he said that the tubes were responsible for approximately one-third of the miles of service that were run by the London Transport Executive. He recognised that a special problem had developed in connection with road services. At present the London bus fleet, in round figures, numbered about 7,000, and, of those, 3,500 were over 12 years of age and 1,800 were over 16 years of age.

It was essential to appreciate that during the war, bodies like the L.P.T.B., with their well-planned organisation of production, and repair and assembly facilities, had had to swing over to war work. After the war, it had been some time before they could get back to their normal job.

He had had to consider, in the early days of this Government, whether, in South London, they would renew the tramway tracks. He had decided that they would not, as it would have tied them to trams in that part of London for another 20 to 30 years.

After acknowledging the ungrudging efforts being made by the Executive and its staff to carry on, he said that soon after the war there had been a strong feeling among bus operators, particularly conductors, about the number of standing passengers. They had been prepared to go to extreme lengths to reduce the number, and the fact that they had recently yielded, and had agreed that the number of standing passengers be increased from five to eight, showed that they had been willing to ease the burden on the London public.

He could not say at the moment the

total number of buses which London Transport would receive during 1948. The figure of 6,000 was given in the White Paper for public service vehicles, but it might, and almost certainly would, be exceeded. They could not always gauge exactly the number that were in the various processes towards completion. He had already taken steps to influence the production of those 6,000 vehicles by increasing their carrying capacity. Of that number, 3,650 would be double-deckers, 1,000 single-deckers of the heavy type, 1,000 single-deckers of a light type, and 350 trolleybuses. A good proportion of the quantity in excess of the 6,000 would be single-deck buses, but they could not all be secured for London Transport.

No doubt the House was primarily interested in the 1949 position. He appreciated their desire to strengthen any views which he might put forward, but he reminded them that in this problem of steel supplies they could not consider any demand in isolation, however important it might be. The House might rest assured that he, as Minister, and the Government, too, recognised the importance of the problem.

Captain F. Noel-Baker asked if the Minister could say that the supply of buses would at least catch up with the withdrawals of buses during the next two years.

Mr. Barnes: No, Sir, I cannot say so.

Questions in Parliament

Mid-Week Travel

Mr. A. M. F. Palmer (Wimbledon—Lab.) on July 19 asked the Minister of Agriculture if he would make arrangements to enable volunteers at harvest holiday camps to start their periods of engagement mid-week, if they so desired, to relieve congestion on the railways.

Mr. T. Williams (Minister of Agriculture) in a written answer stated: Applications for bookings at volunteer agricultural camps to start at mid-week are very rarely received because few people have their holidays fixed that way. The change would add complications for camp staffs and transport, and would involve a waste of accommodation at busy times without appreciably relieving railway congestion.

Sodium Chlorate for Railways

Lt.-Colonel G. Lambert (South Molton—Lib. Nat.) on July 22 asked the President of the Board of Trade what had been the total quantity of sodium chlorate available in each of the last five years, giving in each case the amounts supplied to farmers and railways, respectively.

Mr. Harold Wilson (President of the Board of Trade): I regret that the information is not available in the form in which Colonel Lambert has asked for it.

Colonel Lambert: Can the Minister give an assurance that the railways are not getting sodium chlorate at the expense of farmers, who are unable to obtain any?

Mr. Wilson: The allocation of this material is made by the single firm in the industry which is responsible for production, and that is why I obviously cannot give the figures relating to a single firm. But I understand that after deducting the minimum quantities needed by the railways and certain priority industries the rest is reserved for farmers.

Colonel Lambert: Are the railways getting their minimum quantity at the expense of farmers, who are getting none?

Mr. Wilson: The farmers are getting a

considerable amount, but obviously we cannot cut off supplies from the railways so that farmers can get more.

Mr. W. M. F. Vane (Westmorland—C.): Will the Minister say what priority industries have a chance before the farmers?

Mr. Wilson: Textiles, dyestuffs and metal refining, but they have only a relatively small quantity.

School Children's Fares

Mr. Ernest Davies (Enfield—Lab.) on July 29 asked the Minister of Education if he would discuss with the British Transport Commission and the appropriate organisations representing the local authorities which were operators of transport undertakings, and the appropriate trade associations representing the private transport operators, the possibility of raising the age for half-fares for children from 14 to 15, in view of the raising of the school age to the latter year.

Sir Richard Acland (Gravesend—Lab.) also asked the Minister of Education whether he would consult the Minister of Transport and the Transport Commission to see if any plan could be devised to enable 15-year-old children travelling to and from school to obtain tickets at reduced prices.

Mr. George Tomlinson (Minister of Education) in a written answer stated: No, sir. So far as travel for an educational purpose is concerned, concessions already exist.

Claim for Repatriation Fares

Major Sir Jocelyn Lucas (Portsmouth South—C.) on July 29 asked the Minister of Transport, if, in view of the announcement by the Government in August, 1945, that all British subjects interned by the Japanese would be repatriated free, he would withdraw his claim for £425 for the repatriation of five sisters from Ennis, County Clare, who had nursed the British sick in the internment camps, and two of whom had died from their sufferings, after repatriation.

Mr. James Callaghan (Parliamentary Secretary, Ministry of Transport) in a written answer stated: The Minister of Transport regrets that he is unable to withdraw the claim on the Eire Government for the payment of these fares.

Rhodesian Railway Link to Sea

Mr. S. Wingfield Digby (Western Dorset—C.) on July 29 asked the Secretary of State for Commonwealth Relations whether he was aware of the urgent need for a new railway to connect Northern and Southern Rhodesia to the sea, either at Walvis Bay or in the Southern Province of Tanganyika; and what help His Majesty's Government was prepared to give to finance such a project.

Mr. P. Gordon-Walker (Parliamentary Under Secretary of State for Commonwealth Relations) stated in a written answer: Yes, sir. His Majesty's Government in the United Kingdom is well aware of this problem. The Southern Rhodesia Government is devoting attention to the possibility of opening new railway outlets to the sea, and the matter was fully discussed with the Prime Minister of Southern Rhodesia when he was in this country earlier in the year. No detailed proposals have, however, yet been put forward to the United Kingdom Government. It has been made clear to the Southern Rhodesia Government that the United Kingdom Government will consider with sympathy such proposals when submitted.

Rolling Stock for Colonies

Sir Wavell Wakefield (St. Marylebone—C.) on July 21 asked the Secretary of State for the Colonies if he was now in a position to give an exact schedule of the proposed delivery dates for the locomotives and wagons on order for use on the railway between Mombasa and Nairobi.

Mr. A. Creech Jones (Secretary of State for the Colonies): I am informed that the manufacturers of the eighteen locomotives now on order hope to start delivery from their works by the end of January next and to complete the order at the rate of four locomotives monthly. The wagons have only recently been ordered, and I am not yet able to give an exact schedule of delivery dates for them.

Road Accidents

Mr. Edgar Granville (Eye—Lib.) on July 14 asked the Minister of Transport if he would give the latest comparative figures for road accidents and what action he proposed to improve the standard of driving and for other safety measures to reduce that serious loss of life.

Mr. Alfred Barnes stated in a written answer: In the first five months of 1948, 1,619 persons were killed on the roads and 50,251 injured. The figures for similar periods in 1947 and 1939 were, respectively, 1,690 killed and 55,943 injured, and 2,472 killed and 82,553 injured. The propaganda campaign to encourage careful and considerate behaviour by drivers and other road users will continue. The Committee on Road Safety submitted its final report in 1947, and I hope shortly to make a statement on the action I propose to take on those of the Committee's recommendations to which effect has not already been given.

Return Tickets on Buses

Mr. J. D. Murray (Spennymoor—Lab.) on June 21 asked the Minister of Transport if he was aware that bus companies in the North-East were refusing to allow passengers to use a return ticket in the same direction, although passengers had been doing that for many years; whether he would state the reason for that change of policy, through which irritation was caused to passengers and conductors; and whether he would advise the Traffic Commissioners that the previous practice should be restored.

Mr. C. F. Grey (Durham—Lab.) also asked the Minister of Transport if he was aware that bus companies in the North-East are insisting that a return bus ticket could not be used twice in the same direction; that that was causing confusion and annoyance to both passengers and conductors; and, as there was no advantage in insisting on that procedure, whether he would advise the Traffic Commissioners to dispense with that regulation.

Mr. Alfred Barnes in a written answer stated: In advising operators that return tickets should be available for one outward and one inward journey, and not for two journeys in the same direction, the Licensing Authority for Public Service Vehicles is simply drawing attention to conditions attached by him to road service licences which were not being observed. I have no power to vary a condition, except on appeal.

Steel Exports

Mr. Martin Lindsay (Solihull—C.) on July 13 asked the President of the Board of Trade what percentage of steel exports was covered by bilateral agreements; and from what date.

Mr. J. W. Belcher (Parliamentary Secretary Board of Trade) in a written answer

stated: Our trade agreements up to the present date cover about 46 to 47 per cent. of our steel exports in 1948.

Allocations of Steel

Wing-Commander Geoffrey Cooper (Middlesbrough West—Lab.) on July 5 asked the Minister of Supply why, in starting period 3 of July 1, no allocation had yet been notified by his department to some sections of the steel industry for either their home or export trade.

Mr. George Strauss (Minister of Supply): Steel tube manufacturers could not be notified of their allocations until it was known how much steel would be available, both from home production and imports. They were advised of their allocations on July 2. Preliminary advice of export allocations was issued on June 12 and formal licences on June 28.

Wing-Commander Cooper: Does the Minister appreciate that when manufacturers are kept waiting in this way for vital information it plays havoc with the home and export trade, and can he prevent a recurrence of this type of thing?

Mr. Strauss: There were special circumstances on this occasion in view of the number of bilateral trade negotiations pending.

Wing-Commander Cooper: In view of the tremendous importance of this matter and the key position allocations of steel play in the home and export trade, I beg to give notice that I shall raise the matter on the adjournment.

ROAD TRANSPORT EXECUTIVE.—The tentative boundaries of the Divisions into which the Road Transport Executive has divided the country for the purpose of freight road haulage operation (see page 173) are as follow:—

Division	Tentative boundaries
Eastern	Bedford Cambridge Huntingdon Lincoln Norfolk Rutland Suffolk
Midland	Derby Nottingham Staffs Leicester Warwick Northampton Oxford Bucks Worcester
North Eastern	Northumberland Durham Yorkshire
North Western	Cumberland Westmorland Lancs. Cheshire Flint Denbigh Merioneth Caernarvon Anglesey
Scottish	Scotland
South Eastern	Hertford Essex Surrey Sussex Kent Middlesex
South Western	Berks Hants Dorset Somerset Wilts Devon Cornwall
Western	Shropshire Montgomery Cardigan Radnor Hereford Gloucester Monmouth Brecknock Glamorgan Carmarthen Pembroke

Notes and News

Locomotive Draughtsman Required.—An experienced locomotive draughtsman is required in the Manchester district. See Official Notices on page 199.

London Transport Executive.—General technical assistants (signalling trainees) are required for temporary posts under the control of the signal engineer at Earls Court Station, London Transport Executive. See Official Notices on page 199.

Traffic Manager Required.—A traffic manager is required by the Hebble Motor Services Limited of Halifax. Applicants should have extensive experience in the traffic department of a passenger road transport undertaking. See Official Notices on page 199.

San Paulo Railway Payment Approved.—The Brazilian Senate has approved the payment in sterling of the recognised capital of £6,638,000, plus interest, of the San Paulo Railway Company. The payment has been approved by the Brazilian President and now awaits the approval of the Finance Ministry. There will have then to be a decree authorising actual payment by the Bank of Brazil.

Torquay-Guernsey Excursion.—The first day excursion from Torquay to Guernsey since 1939 by a British Railways, Western Region, cross-Channel steamer has been arranged for Wednesday, August 18. Weather permitting the R.M.S. *St. Helier* will sail from Torquay at 8.30 a.m. and be due back at 10.30 p.m. Passengers will have five hours on Guernsey, which will be sufficient time for a motor trip round the island. The return steamer fare will be 25s.

Valuation of Transport Securities.—After considering the arguments and evidence submitted at hearings on July 20 and July 28, bearing on an application by the British Transport Commission, pursuant to Section 17(3) of the Transport Act, 1947, the Transport Arbitration Tribunal has issued an Order, dated July 30, 1948, determining the values of the following securities specified in Part II of the Fourth Schedule to the Act:—

Name of body by which security was issued	Nature of security	Value
The Lee Conservancy Board	3½ per cent. debenture stock	£101 10s. per £100 nominal value
	3 per cent. advances from development fund—	
	(a) as to £12,500 secured only on the profits of the Stort Navigation	5s. only per £100 nominal value
	(b) as to the remaining £4,350 lcs. 10d.	£99 per £100 nominal value
	3½ per cent. mortgage loan	£102 per £100 nominal value
	3½ per cent. mortgage loan	£42,372 in respect of the whole amount of the loan outstanding

Acquisition of Beira Port by Portugal.—On July 28 it was announced that the Portuguese Government had decided to buy the British-owned port of Beira, in Portuguese East Africa. The port had previously been operated by the Companhia da Porto de Beira, in which the London company, Port of Beira Limited, owned a controlling interest. The sum of 600,000,000 escudos was mentioned as the cost of taking over the port, and it was explained subsequently that this figure included not only compensation to the com-

pany, but also the cost of the company's withdrawal, and development works and plant at the port. It was stated also that it would cost 600,000,000 escudos to take over the Beira Railway, which connects the port with Rhodesia. It was indicated by the Portuguese Government on July 28 that the acquisition of the railway was being considered as well.

Railway & Canal Securities (Conversion Date) Order.—The Minister of Transport has made the Railway & Canal Securities (Conversion Date) (No. 9) Order, 1948 (Statutory Instrument 1948 No. 1653) under paragraph 1 of Part II of the Fifth Schedule to the Transport Act, 1947. Copies are obtainable from H.M. Stationery Office, or through any bookseller, price 1d. each.

New South Wales Seeks British Rolling Stock.—The Premier of New South Wales, who will arrive in London shortly, will endeavour to place orders for £5,000,000 worth of railway rolling stock. It has been reported that steel production in Australia is at present much below demand, seriously delaying the railway programme. The rolling stock sought includes 50 refrigerator cars, 300 covered vans, and thousands of wagons.

French Cinema Coach.—The French National Railways have recently introduced a cinema coach, the first in France,

£239,306, various appropriations, including preference dividend and the proposed 20 per cent. ordinary dividend, will absorb £190,674, leaving £48,632 to be carried forward. In normal circumstances the directors would have felt justified in recommending a higher dividend.

Rapier Fork-Lift Truck.—It was announced at the recent summer sales conference of Ransomes & Rapier Limited, Ipswich, that the company has added heavy-duty fork-lift trucks to the list of Rapier products, and that two prototype machines already are undergoing tests. The truck, which is intended for heavier duties than previous trucks made in this country, is mounted on pneumatic tyres and will handle 10,000 lb. at 21 in. to a height of 17 ft.

Sentinel (Shrewsbury) Limited.—There was an increase of £13,558 in the net profit for the year to March 31, which amounted to £40,549. Provision for taxation was £29,146, as compared with £18,159 in the previous year. This year an allocation of £36,460 has been made to general reserve, no similar provision having been made in 1946-47. The report says that the company's programme for the production of diesel road vehicles and machine tools is well under way, and that deep coal-mining machinery has been manufactured in large quantities for the National Coal Board. It

tinuance of that same close relationship with British Railways. Referring to the powers of the British Transport Commission to put forward area schemes for road transport, the Chairman said that a probable result of the acquisition of their company's undertaking under some such area scheme might be a substantial increase in bus fares, since it was likely that an area board would be compelled to adopt fares closely related to those of the railways. In his opinion, and he had spent almost a lifetime in the industry, the public was better served today than it would ever hope to be under any regional board.

Uruguay Debentures Moratorium.—The Uruguay Northern Railway Co. Ltd. has announced that, although it will be unable to meet its obligations in respect of the 5 per cent. prior lien debentures now that the interest moratorium on that stock has expired, a fresh moratorium will not be sought for the time being. It had been arranged already for the stock to be repaid at 105 per cent. out of the net profits of the sale of the railway to the Government of Uruguay. The sale agreement has not yet been ratified by the necessary majority of stockholders, but it has been decided, nevertheless, to defer any further action in connection with the stock for the time being.

Railway Docks and Canals Transferred to Docks Executive.—The British Transport Commission announced recently that responsibility for the management and operation of the former railway-owned docks in South Wales was transferred on August 1, 1948, from the Railway Executive to the Docks & Inland Waterways Executive (reference to this was made also in our last week's issue). The ports concerned are Newport, Cardiff, Penarth, Barry, Port Talbot, Briton Ferry, Llanelly, Burry Port, and Swansea. The management and operation of the Shropshire Union Canal, Trent & Mersey Canal, and the King's Lynn Docks & Railway Company have also been transferred from the Railway Executive to the Docks & Inland Waterways Executive, from July 25, 1948.

Transport Arbitration Tribunal.—After considering the arguments and evidence submitted at the hearing on July 28, bearing on an application by the British Transport Commission, pursuant to Section 17(3) of the Transport Act, 1947, the Transport Arbitration Tribunal has issued an Order, dated July 30, 1948, determining the values of the following securities specified in Part II of the Fourth Schedule to the Act:—

Name of body by which security was issued	Nature of security	Value per £100 nominal £ s. d.
The Undertakers of the Aire & Calder Navigation	Terminable loans ...	100 0 0
	3½ per cent. irredeemable debenture stock	100 0 0
	* 4 per cent. redeemable debenture stock	109 0 0
	Ordinary stock ...	66 10 0

South Wales Tool Repair Works.—Bridgend Trading Estate, Glamorgan, was selected by the Consolidated Pneumatic Tool Co. Ltd., 232, Dawes Road, London, S.W.6, as the site for a new service station to cover the South Western area. This new works, recently opened, has facilities for carrying out major overhauls to compressors and repairs to pneumatic and electric tools. There are experienced engineers available at short notice for attendance on site. Other service stations have been in



Interior of new cinema coach for service on main lines of the French National Railways

for service on main lines. The accompanying illustration shows the interior of the coach, with the screen in the background.

Keith Blackman Limited.—For the year ended March 31, 1948, trading profit was £223,161, against £98,900, and net profit £194,879. Mr. M. Burningham, Chairman & Managing Director, states in his annual report that £120,000—more than 60 per cent. of the profit earned—is being set aside this year for taxation, which is a measure of the heavy toll exacted from industry by the State. During the next few years, additional manufacturing facilities will have to be provided, and for this and other purposes, such as extensions to the diesel power plant, the development reserve account created last year is being increased by £37,124 to £60,000. From the available balance of

was reported on July 27 that the directors were making an application for permission to issue further capital. In the meanwhile, business development has been financed by advances amounting to £705,000 from the controlling company, Metal Industries Limited.

Trent Motor Traction Co. Ltd.—Mr. J. W. Womar, Chairman of the Trent Motor Traction Co. Ltd., presided at the general meeting of the company on March 9. He recalled that the L.M.S.R. and L.N.E.R. had held large share interests in their company, dating back to 1929, and that a large measure of co-ordination had been achieved with the railways. They acknowledged gratefully the help and assistance which they had always received so readily from the L.M.S.R. and L.N.E.R., and looked forward to a con-

OFFICIAL NOTICES

None of the vacancies on this page relates to a man between the ages of 18 and 50, inclusive, or a woman between the ages of 18 and 40, inclusive, unless he, or she, is excepted from the provisions of the Control of Engagement Order, 1947, or the vacancy is for employment excepted from the provisions of that Order.

HEBBLE MOTOR SERVICES LIMITED

TRAFFIC MANAGER

APPLICATIONS are invited for the post of Traffic Manager, salary £500 to £600 p.a. Applicants should have extensive experience in Traffic Department of a passenger road transport undertaking, and experience in Courts of Licensing Authorities would be an advantage.

Application, with full details of age, education, qualifications, experience, and date on which applicant would be free to take up duties, should be marked "Private," and addressed to GENERAL MANAGER, HEBBLE MOTOR SERVICES LIMITED, Walnut Street, Halifax, to reach there by or before August 28 next.

operation for some time in London, Newcastle, and Glasgow, while district offices with technical personnel are centred in Birmingham, Manchester, Leeds, Dublin, and Belfast.

Machine Tool Exhibition, 1948.—The Machine Tool & Engineering Exhibition organised by the Machine Tool Trades Association, Victoria House, Southampton Row, London, W.C.1, will be held at Olympia, London, from August 26 to September 11. This important exhibition, the first of its kind to be held in London since the M.T.T.A. exhibition of 1934, will provide the largest display of machine tools, woodworking machine equipment, etc., ever staged in this country, and it will be international in scope. All three halls at Olympia have been booked and there will be more than 250,000 sq. ft. of stand space.

Eight Ways of Saving Paper.—One well-known catering firm is considering the following points in connection with paper salvage:

- Can thinner paper be used?
 - Can the number of copies be reduced?
 - Are there used forms which can be re-used on blank sides?
 - Are there forms which can be salvaged by repulping?
 - Can the size of forms be reduced?
 - Can a form be designed to do more than one job?
 - Can the Recordak camera be used to avoid taking copies?
 - Can economies be made by elimination of unit forms?
- This series of questions was drawn up by the clerical supervisors and shows a very practical approach to the problem.

North Western Road Car Co. Ltd.—Mr. J. W. Womar, Chairman of the North Western Road Car Co. Ltd., recalled in his speech at the annual meeting on June 28 that the 25th anniversary of the undertaking occurred on April 23 this year. Copies of an illustrated brochure describing its history were available at the meeting, and were distributed also to every employee and authority with which the company is associated. Mr. Womar said that, although their revenue had shown an expansion during the year, expenses were substantially greater, and various wages awards would cost them approximately £175,000 over a full year in future. Pointing out that area schemes for road transport must be promoted under the provisions of the Transport Act, 1947, he said that it would be very difficult, if not impossible, to produce an area board with the personal touch. Fares might, and probably would, be raised without the

LONDON TRANSPORT EXECUTIVE. Applications are invited from suitable candidates for temporary posts as General Technical Assistants (Signalling trainees) under the control of the Signal Engineer at Earls Court Station. Probable duration of employment two to three years.

Qualifications to include the National Certificate in Electrical Engineering or its equivalent, and some drawing office experience. Training will be given in railway power signalling for three months when an examination will be held.

Commencing salary up to £445 per annum, according to age and qualifications. The successful candidate will be required to pass a medical examination. Canvassing, directly or indirectly, will disqualify a candidate.

Applications giving full particulars of education, business and other experience, professional qualifications and age should be sent to the Staff Officer (F/EV 22), London Transport Executive, 55, Broadway, S.W.1, within 14 days of the appearance of this advertisement.

An addressed envelope should be enclosed for acknowledgment.

traveller having any say in the matter. Mr. Womar was of the opinion that any attempted reorganisation of bus services would have to be devised along lines very different from those followed in the case of any industry already nationalised. It would, indeed, be a sad day for their regular passengers if their services passed into the hands of an area board.

Italian Offer of Rails against Scrap Iron.—An Italian firm is reported to have offered to the Egyptian State Railways, on a barter basis, steel rails in exchange for scrap iron, in the proportion of one ton of rails to two tons of scrap. The Egyptian State Railways Administration has 35,000 tons of scrap, and the Italian offer was said to have been considered at a meeting held between the Egyptian Prime Minister and the Director-General of the E.S.R.

Bolivian Visitors at Hunslet Works.—Señor Don Roberto Queorejazu Calvo, Bolivian Chargé d'Affaires, Señor Scott-Murga, Bolivian Counsellor, and Colonel V. A. G. Cecil, of the Peruvian Corporation, visited the works of the Hunslet Engine Co. Ltd. at Leeds on July 20, where they inspected a 2-8-0 metre-gauge locomotive built for the Guaqui-La Paz Railway of the Peruvian Corporation. After touring the works the party paid a visit to Lofthouse Colliery and saw the underground haulage system worked by Hunslet flameproof diesel locomotives.

Richard Thomas & Baldwins Limited.—Addressing the annual general meeting recently, Mr. E. H. Lever, Chairman & Joint Managing Director of Richard Thomas & Baldwins Limited, referred to the transfer of fourteen of the company's tinplate works to the Steel Company of Wales Limited on September 27 last year. In consideration of the transfer of the working capital, the company had received 1,175,000 shares of £1 each in the Steel Company of Wales Limited. In addition, the company held 3,000,000 £1 ordinary shares (1s. paid), in the Steel Company of Wales Limited. The amount unpaid on these shares, namely, £2,850,000, would be called up on or before July, 1952, or at some later date agreed on by the Finance Corporation for Industry. With regard to the company's own works, their installations were being maintained and kept up to date, and further amounts had been spent on modernisation of plant. A new electrolytic tinning plant, the only one of its kind in the country, had started operations at Ebbw Vale in July last year. It was proving highly successful and turning out excellent quality plates.

EXPERIENCED LOCOMOTIVE DRAUGHTSMAN. 28-40 years age, Manchester District. State wages.—Box 137, *The Railway Gazette*, 33, Tothill Street, Westminster, London, S.W.1.

THE RAILWAY HANDBOOK provides the railway student with a collection of useful statistics and information relating to the railways of Great Britain and Ireland. In addition, in matters of international interest, such as speed and electrification progress, the book extends its scope to cover the whole world in order to present a complete picture of these increasingly-important developments. 170 pp. Dy. 8vo. Paper covers. Price 5s. By post 5s. 3d.

MECHANICAL APPLIANCES FOR HANDLING RAILWAY TRAFFIC. By G. Bulkeley. An explanation of the employment of mechanical apparatus for handling and carting general goods. Cloth. 7½ in. by 5 in. 132 pp. Illustrated. 5s. By post 5s. 3d.

Retail Prices Index.—At June 15 the official index figure, which measures changes in the average level of retail prices compared with the level at the base date, June 17, 1947 (taken as 100), was 110, compared with 108 at May 11.

U.S. Rail Freight Rate Increases.—The United States railways are insisting that the Interstate Commerce Commission's freight rate adjustments announced recently are inadequate and are planning a new plea for relief. The commission stated that it had adjusted temporary 25 per cent. increases granted last October, raising some and lowering others, with a net result that the railways would receive about 65 million dollars more revenue than previously.

Delivery of Canadian Locomotives to India.—The Indian Supply Mission in Washington stated recently that the shipment of the first 150 freight locomotives purchased in Canada would begin in early August and was expected to continue until the end of the year, when the first shipment of 200 passenger locomotives on order would begin from the American manufacturers. All these locomotives would be in India within six or seven months thereafter.

London Transport Executive Trustee Company.—The name of the London Passenger Transport Board Trustee Co. Ltd. was changed in April last to the London Transport Executive Trustee Co. Ltd. This company was incorporated on November 14, 1936, to undertake and discharge on request the office and duties of trustees in relation to any Fund established for the benefit of London Transport employees and of the investments of any of the Funds. The directors are Messrs. John Cliff (Chairman), Deputy Chairman of the London Transport Executive; A. H. Grainger, Member of the London Transport Executive; L. C. Hawkins, Member of the London Transport Executive; C. G. Page, Secretary, London Transport Executive; F. A. A. Menzler, Chief Development & Research Officer, London Transport Executive; A. Bull, Chief Staff & Welfare Officer, London Transport Executive; and H. S. Chapman (Secretary), Assistant Secretary, London Transport Executive.

New Indian All-Metal Coaches.—A new type of post-war third class coach, now nearing completion at the Hindustan Aircraft Limited, Bangalore, is the first of an initial order of one hundred for the Indian Railway Board. The structural design closely follows aircraft principles,

combining durability with maximum strength and minimum weight and affording greater safety. Fans, water-alcoves, mirrors, and other amenities are provided. Better seating, sleeping accommodation, and lavatory facilities are a special feature. The Hindustan Aircraft Limited is mass-producing these coaches and it is expected that third class accommodation on the Indian railways will be improved considerably as more of them are delivered.

Bulgarian-Built Locomotive.—The first locomotive to be built in Bulgaria has just been completed in a Sofia works.

New Railway Feature Film.—"Loco. Number One," a feature film produced by Empire Film Distributors Limited, was shown before an audience of railway officers and the technical press at the Gaumont Theatre, Wardour Street, on August 10. The story is built around a retired railway engine driver, who by means of a model railway system constructed as a hobby, conducts the audience on a tour of his favourite rail journeys. The action leaves the model railway and turns to such routes as the West Highland and Aberdeen-Edinburgh lines, covering topics of general as well as railway interest; coming south, the birthplace of George Stephenson, Newcastle-on-Tyne, Doncaster Works, and Grimsby are among the places visited before the driver is seen making his final footplate run.

Railway Engineers Required for Ceylon.—Applications are invited by the Ceylon Government Railway for two posts of District Engineer (temporary) and one post of Assistant District Engineer (temporary) in its Civil Engineering Department. Applicants for the two first-mentioned posts should be Associate Members of the Institution of Civil Engineers or of an approved engineering institution, and have had at least eight years' experience as a responsible officer (excluding apprenticeship training); and must be capable of controlling a district of 200-400 miles. Salary would be between £600 and £960 (on the scale £600-£30-£960), according to qualifications and experience. An applicant for the last mentioned post should have obtained the B.Sc.(Eng.) standard, and/or be A.M.I.C.E. or similar; should have had at least three years' experience on a main-line railway; and would be expected to assist, or, if required, act for, a District Engineer in a 200-400 miles district. Salary would be between £340 and £570 (on the scale £340-£20 and £30-£570), according to qualifications and experience. In all cases, engagement will be on agreement for three years, subject to the usual conditions governing temporary appointments. There would be concessions as to quarters and passages. Candidates should apply by letter to the Ceylon Government Representative in London, Ceylon House, 28, Cockspur Street, S.W.1, on or before September 7 next, stating age, qualifications, etc., with copies of recent testimonials as to their practical experience.

Forthcoming Meetings

August 13 (Fri.).—Electric Railway Society; visit to Post Office (London) Railway.
August 18-28.—The Model Engineer Exhibition at the New Royal Horticultural Hall, Westminster. Open from 11 a.m. to 9 p.m.

Railway Stock Market

Stock markets commenced the week in better fettle, with prices responding to moderate improvement in demand, but earlier gains were not all maintained, although British Funds continued to reflect institutional buying. In fact, 3 per cent. Electricity stock has touched the new high level of 101½, later easing to 101. British Transport (1978-88) displayed activity around 97½, continuing its improvement despite a good deal of selling following any fractional rise. In some quarters the view persists that, before the end of the year, the price will have reached par or over. Over the next few months, following repayment of Argentine railway preference and ordinary stocks, some £50,000,000 will be released for reinvestment, and it may be that a large proportion of this may go into British Funds and Brazilian railway stocks. British Transport (1968-73) has continued to move with 3 per cent. Electricity stock, remaining fractionally below the latter at 100½.

San Paulo Railway ordinary has risen further to 164 on the latest step, bringing near the payment of the "recognised capital." It is realised, however, that this sum will be sufficient only to permit repayment of the debentures and preference stock, and that the ultimate amount to be received by ordinary stockholders will depend on the final agreement as to payment for ancillary assets in Brazil. This may not be decided until next year. The view persists, however, that a fair agreement would mean that stockholders should eventually receive more than the current market price of the ordinary stock. There have been indications of a moderate resumption of speculative activity in other Brazil rails despite the absence of any fresh revival of take-over developments. Leopoldina ordinary strengthened to 10½, the preference stock was 31, the debentures 62 and the Terminal debentures 55. Great Western of Brazil ordinary shares

were 81s. 3d. Elsewhere, Uruguay railway stocks have kept quiet on market talk of the possibility of a new share-out scheme, failing any compromise between Central Uruguay ordinary and second debenture stockholders. Still under the influence of satisfaction with the payment on account of dividend arrears, Antofagasta preference stock firmed up to 66, with the ordinary more active around 11½, while in other directions Nitrate Rails shares strengthened to 73s. 9d. United of Havana 1906 debentures, however, receded to 14½. Among other securities Beira Railway bearer shares (62s. 6d.) remained active on take-over possibilities. Mexican Railway 6 per cent. debentures were 85½, and Manila "A" debentures 90½, with the preference shares 9s. 3d. Canadian Pacific improved to 23½; the preference stock was 79½ and the debentures higher at 108½.

There has been better demand for road transport shares, but those of the operating companies often are difficult to obtain. In many cases, dividend payments last year were raised, and these distributions should be maintained. In the event of take-over by British Transport the assumption persists that compensation would be above current prices. Tillings rallied and changed hands over 100s. before easing to 99s. 9d. Its negotiations with British Transport are proving protracted.

Iron and steels reflected the firmer trend of markets. Dorman Long being 30s., United Steel 27s. 9d., and Guest Keen 46s., the latter responding to the past year's profit increase and maintained 11 per cent. dividend. Elsewhere, Gloucester Wagon have risen to 60s., Beyer Peacock changed hands at 21s. 3d., and Charles Roberts, on continued market talk of the possibility of a partial return of capital, have been dealt in up to £7½. Vulcan Foundry were 28s. and North British Locomotive 22s. 6d. Babcock & Wilcox improved to 66s. 3d., T. W. Ward were 57s. 6d., and Ruston & Hornsby moved up to 52s.

Traffic Table of Overseas and Foreign Railways

	Railways	Miles open	Week ended	Traffics for week		No. of week	Aggregate traffics to date			
				Total this year	Inc. or dec. compared with 1946/47		Total	Increase or decrease		
							1947/8			
South & Central America	Antofagasta ...	834	25.7.48	£ 60,350	+	£ 13,350	30	1,572,880	+	£ 370,740
	Bolivar ...	174	June, 1948	\$43,616	+	\$66,369	26	\$442,327	—	\$232,536
	Brazil ...	—	—	—	—	—	—	—	—	—
	Cent. Uruguay ...	970	31.7.48	33,579	+	2,392	4	145,715	—	16,980
	Costa Rica ...	262	May, 1948	38,913	+	2,930	48	349,643	+	26,895
	Dorada ...	70	Mar., 1948	19,700	—	9,500	13	59,500	—	30,000
	G.W. of Brazil ...	1,030	31.7.48	29,200	+	2,000	30	1,001,300	+	14,600
	Inter. Ctl. Amer. ...	794	June, 1948	\$1,068,881	+	\$66,817	26	\$7,066,133	+	\$163,290
	La Guaira ...	223	July, 1948	\$101,265	+	\$487	30	\$741,558	—	\$43,602
	Leopoldina ...	1,918	31.7.48	67,456	—	8,188	30	1,641,851	—	361,011
	Midland Uruguay ...	319	June, 1948	23,203	+	5,169	52	233,269	+	28,135
	Nitrate ...	382	31.7.48	17,392	+	8,537	30	174,563	+	39,508
	N.W. of Uruguay ...	113	June, 1948	4,183	—	1,664	52	65,784	—	3,243
	Paraguay Cent. ...	274	30.7.48	\$95,961	+	\$43,729	4	\$450,130	+	\$195,049
	Peru Corp. ...	1,059	July, 1948	178,942	+	16,252	4	178,942	+	16,252
	Salvador ...	100	Apr., 1948	£175,000	+	£30,000	43	£1,796,600	+	£313,600
	San Paulo ...	153½	June, 1948	8,770	+	2,565	52	97,790	+	46,870
	Taital ...	156	31.6.48	50,678	—	10,887	4	214,121	—	79,562
Uruguay Northern	73	June, 1948	1,771	+	432	52	15,802	—	1,763	
Canada	Canadian National ...	23,535	June, 1948	9,927,000	+	564,000	26	57,166,000	+	4,055,750
	Canadian Pacific ...	17,037	June, 1948	6,886,500	+	270,250	26	40,207,500	+	2,501,250
Various	Barsi Light† ...	202	June, 1948	22,830	—	5,535	13	80,707	+	472
	Beira ...	204	May, 1948	119,592	+	14,234	34	936,254	+	206,790
	Egyptian Delta ...	607	10.7.48	17,470	+	929	14	178,422	+	15,399
	Gold Coast ...	536	June, 1948	207,376	+	67,243	13	665,638	+	189,875
	Manila ...	—	—	—	—	—	—	—	—	—
	Mid. of W. Australia ...	277	May, 1948	29,088	+	8,428	48	268,433	+	72,477
	Nigeria ...	1,900	June, 1948	403,138	+	91,614	13	1,292,292	+	249,560
	Rhodesia ...	2,445	Sept., 1947	643,980	+	102,833	52	6,787,603	+	612,938
	South African ...	13,323	3.7.48	1,385,429	+	90,736	14	17,703,164	+	1,017,539
Victoria ...	4,774	Apr., 1948	1,388,846	+	615,854	43	—	—	—	

↑ Receipts are calculated @ 1s. 6d. to the rupee